

**TEXT FLY WITHIN  
THE BOOK ONLY**

UNIVERSAL  
LIBRARY

**OU\_154366**

UNIVERSAL  
LIBRARY



OSMANIA UNIVERSITY LIBRARY

Call No. 330.954

Accession No. 30588

R 16 R

Author Ramaswamy T. N.

Title Rebuilding India

This book should be returned on or before the date  
last marked below.

---





# REBUILDING INDIA

BY

**T. N. RAMASWAMY,**

M.A., B.Sc. (Econ.) (London ),

*Author of "The Economic Problem of India"*

*"Post-War Economic Coordination for India"*

*"Economic Stabilisation of Indian Agriculture"*

*"Full Employment for India"*

*Department of Economics,*

*Benares Hindu University.*

WITH A FOREWORD

BY

**Dr. Amaranatha Jha,**

*Vice-Chancellor,*

*Benares Hindu University.*

1948

BANARAS

**NAND KISHORE & BROS.**

FIRST PUBLISHED, DECEMBER, 1948

*All Rights Reserved.*

*Printed by*  
Rama Krishna Das,  
at the Benares Hindu University Press, Benares.

TO  
The Late  
Mahamana Pandit Madan Mohan Malaviya,  
The Founder of  
The Benares Hindu University,

This book is most respectfully dedicated  
in humble appreciation of his monumental work  
in the cause of Indian culture.

नत्वं कामये राज्यं न स्वर्गं नाऽपुनर्भवम् ।  
कामये दुःखतप्तानां प्राणिनामार्तिनाशनम् ॥\*

I do not for a royal realm aspire,  
For release or for paradise,  
To serve those bent with grief, I desire,  
And calm their sorrows and help them rise.

---

\* I owe this *Sloka* to the courtesy of Professor Trilochan Pant, the former Private Secretary to the Founder of the University.



## FOREWORD

First religion, then philosophy, and now science and economics play the dominant part in the affairs of men and nations. Herbert Fisher says in his "History of Europe": "The developing miracle of science is at our disposal to use or to abuse, to make or to mar. With science we may lay civilisation in ruins or enter into a period of plenty and well-being the like of which has never been experienced by mankind." The scientist is, however, at the mercy of emergency ordinances which determine what his scientific activity shall be and in what direction his knowledge and skill are to be employed. But in normal times there is a vast field where science can exert a beneficent influence on society. Lenin said as long ago as 1920: "We are confronted with the task of economically regenerating the whole country, of reorganising, restoring both agriculture and industry on a modern technical basis, which rests on modern science, on technique, on electricity." Science can contribute and has contributed to economic welfare.

Bernard J. Stern says in his work on 'Technological Trends and National Policy':

"The most potent of the cultural factors are clearly economic: efforts to maintain economic advantage and hegemony over competing classes, and competition in the same industry and rivals for

the same market in allied fields ; costs of introducing the new method or product, which in its early form is usually crude and unstandardised, and but one of a number of innovations designed to solve the specific problem at hand ; the losses incurred through the depreciation of machinery and goods made obsolete by the innovation ; the unwieldy structure and the rigidity of large-scale corporate enterprises that hesitate to disturb a market which already yields profits through restricted production ; the difficulties of small-scale enterprise to make the necessary capital investments ; the stultifying influence of capitalist crises ; and labourers' efforts within a profit system to prevent being victimised by technological unemployment by loss of skill, by speed-up and lowered wages. There are also political factors that have their own dynamics of functioning which may be directed to impede technological change, as for example, the restricting influence of nationalism ; faulty patent legislation and judicial decisions justifying suppression ; the system of issuing 'perpetual' franchise ; the power of dominant industrial groups to control legislation to their interests as against beneficial innovations that imperil their profits."

Mr. Ramaswamy has discussed in this book the vital questions which every Indian economist and statesman must examine and study in order to plan wisely schemes of future development. It has been well said that while India is rich, the Indians are poor. No one who has travelled abroad, particularly in the New World, can help being struck by the extremely low standard of living in this country and contrasting the general poverty here with the general prosperity elsewhere. The raising of the standard of living of the masses

should be the Government's prime concern. They must be stirred out of what used to be described as their 'pathetic content'.

But while the economic wellbeing of the people must be attended to, every effort should also be made to improve their standard of life. The tragedy of modern civilisation is that moral advance has not kept pace with economic and scientific progress. To quote Professor Toynbee: "What shall we do to be saved? In politics, establish a constitutional cooperative system of world government. In economics, find working compromises (varying according to the practical requirements of different places and times) between free enterprise and socialism. In the life of the spirit, put the secular super-structure back into religious foundations."

July 22, 1948.

AMARANATHA JHA





## PREFACE

I have long been urged to bring out the various schemes that I have indicated in my previous books by several friends and reviewers. I have attempted that task in the course of this book which I now place before the public.

A few words of explanation are needed in prefacing this book. It happens to be the result of my research into the economic problems of our country spread over a period of ten years. I have attempted, in this period, to study the problems from all angles, but I do not claim to be striking in my conclusions or original in the solutions which I have offered in the course of this book. Our country is not a homogeneous economic or cultural unit. Our problems do not yield to any process of standardisation in analysis or uniformity in solution. It is no exaggeration to urge, at this stage of progress of economic knowledge, that the problem of balancing the economic evolution of densely populated areas of the world is still an unsolved problem of economic administration. The difficulties of approach and solution are almost overwhelming in their complexity. Our economic problems are further complicated by the intrusion of non-economic forces which are abundant, specially in an ancient civilisation that is called upon to find its balance in a reconstituted scheme of cultural values in which the world today is caught. We

have to perform the economic miracle of balancing old values with an ever-shifting framework of cultural advance of the modern world.

Naturally, I had to plod a lonely furrow. Often, I had to overstep the boundaries of accepted economic doctrine, even at the risk of being called an "economic heretic", as Dr. Anstey has put it, in order to find out the unexplored pockets of economic stagnation that persist in a subsistence economy. These hardships make the solutions offered of limited appeal, and I have sought throughout the book, to emphasise as far as was possible, the play of economic forces in the reaching of a satisfactory standard of living for the four hundred million people of this subcontinent of economic and cultural twilight.

In presenting the problems as I diagnose them and the solutions as I see them, the approach has been both cautious and conservative. My approach to the problems of economic adjustment in the country, as indicated in my previous volumes, has created some degree of economic scepticism in some quarters. I have not consciously engaged myself in any idol-breaking crusade, though I had to move sometimes along paths which were strewn with broken idols, whose worship had long been abandoned. I have for over a decade felt and urged the need for a severe regional approach to the fundamental problems of economic life in our country, as my conviction that over-populated zones of the world can solve their economic problems only through balancing of regional

economic evolution with regional population pressures has not yet been disturbed. I pass on this experience to my readers for whatever it is worth.

A word with regard to the method adopted in the writing of this book. I have broken away from the traditional type of documentation, only to maintain continuity of interest in the main lines of thought that run across the book. I could have documented every page of this book, but this does not mean that the statements occurring in this book are without support or authority. My desire to reach a wider public and to bring within a set compass, the conclusions and diagnosis of the main economic problems of the country is responsible for this structural change in the book.

After this *affidavit*, my task is simple. I have tried to maintain throughout the book an academic approach. I have sought to maintain, as far as I could manage it, a theoretical symmetry in the plans submitted in this book. I have all along emphasised the need for further research into regional problems and have indicated the lines along which further enquiry should proceed. This is but inevitable in a country like ours which is today caught in the tornado of cultural and ideological conflict. Economic reconstruction for a poor country like ours cannot await the dissolution of these cultural storms, nor can it be sacrificed at the altar of certain theoretical presumptions or predilections. The task of balancing the economic evolution of the country in a world whose economic contours are ever-shifting is not

easy or simple. I only desire to submit that the lines of solutions offered in the following pages are carefully studied and sifted, in order to reach satisfactory standards of living for the huge populations of the subcontinent.

It is my pleasant duty to offer my profound gratitude to Dr. Amaranatha Jha, Vice-Chancellor of the Benares Hindu University for the generosity with which he agreed to contribute his valuable foreward to this book in spite of his many and pressing preoccupations. I cannot forget the encouragement and guidance that I have always received from Dr. S. Radhakrishnan, and it is my duty to record my sense of deep gratitude to him. Pandit Govind Malaviya has very kindly permitted me to dedicate this small volume to his august father the late Mahamana Pandit Madan Mohan Malaviya, the founder of the Benares Hindu University and I am grateful for the kindness shown. I must express my obligations to numerous friends who have helped me in the preparation of this book and to Mr. Ramakrishna Das and his staff at the Benares Hindu University Press, who have devoted themselves unstintingly to the printing of this book during what were, rather, strenuous days.

Mahasivaratri, 1948,      **T. N. Ramaswamy.**  
Benares Hindu University.

## CONTENTS

Foreword by Dr. Amaranatha Jha.	P. v
Preface.	P. ix

### BOOK I.

#### THE BACKGROUND.

	PP. 1—46
1. The Problem of Poverty	.. 1
2. Poverty and Population.	.. 5
3. Economic Crisis in India	.. 8
4. Progressive Living Standards	.. 13
5. Problems of Progress	.. 17
6. Economic Reconstruction	.. 23
7. Balance between Agriculture and Industry	.. 29
8. Limits to Economic Advance in India	.. 36
9. Assumptions of Economic Change	.. 44

### BOOK II.

#### POPULATION AND AGRICULTURE

	PP. 47—127
1. Density of Population	.. 47
2. Population Pressures	.. 50
3. Balance between Population and Progress	.. 54
4. Schemes of Economic Advance	.. 59
5. New Approach Needed	.. 63
6. Objective of Planning	.. 66
7. Targets for Planning	.. 72
8. Food Targets	.. 73
9. Cereals	.. 76
10. Pulses	.. 79
11. Sugar	.. 80
12. Fruits and Vegetables	.. 81
13. Oils and Fats	.. 83

	Page
14. Milk ..	84
15. Fish and Meat. ..	85
16. Significance of Targets ..	88
17. Clothing Problems ..	90
18. Cotton Textiles ..	91
19. Other Textiles ..	94
20. Silk ..	96
21. Agriculture and Irrigation. ..	99
22. Forest Administration ..	106
23. Balancing of Agriculture ..	109
24. Stabilisation of Prices ..	113
25. Economic Administration ..	117
26. Land Problems ..	119
27. New Forces in the Village ..	122
28. Change of Emphasis ..	125

### BOOK III.

#### EMPLOYMENT AND INDUSTRIALISATION

	PP. 128—203
1. Illusion of Progress ..	128
2. The Blind Wall ..	130
3. Balance of Occupations ..	134
4. Use of Manpower ..	136
5. Avenues of Progress ..	139
6. Rebuilding Employment ..	142
7. Power Resources : Coal ..	147
8. Oil Power ..	149
9. Hydro-Electric Power ..	149
10. Electrical Engineering ..	152
11. Problems of Heavy Population Areas. ..	155
12. Economic controls ..	157
13. Limits to Heavy Industrialisation ..	162
14. Planning of Industries ..	166
15. Regional Plans ..	170
16. Densely Populated Provinces ..	173
17. Spreading out of Industries ..	178

	Page
18. Three Panelled Industrial Plan ..	179
19. Primary Section ..	181
20. City Industries ..	183
21. Economic and Technical Problems ..	185
22. Large Industries ..	187
23. Medium Industries ..	190
24. Primary or Small Industries ..	192
25. Objectives of Industrial Planning ..	196
26. Capital for Industries ..	197
27. Resume ..	201

## BOOK IV

### ECONOMIC BALANCE AND RISING LIVING STANDARDS

	PP 204—259
1. Higher Living Standards ..	204
2. "Sustaining Force" & Economic Civilisation ..	207
3. Careful Planning ..	209
4. Price—Controls ..	210
5. Wage—Controls ..	214
6. Planning of Agriculture ..	217
7. Regional Plans. ..	218
8. Economic Zones ..	219
9. Rural and Urban 'Units' ..	221
10. The Area of the "Zone" ..	228
11. Rural Planning and Urban Development ..	231
12. Agricultural "Markets" ..	234
13. Land Reclamation ..	236
14. Distribution of Land ..	238
15. Men and Materials ..	240
16. The Smaller Urban Units ..	242
17. The Larger Towns ..	247
18. The Small Industries ..	251
19. Changing Civilisation ..	253
20. Long-range Stability ..	254
21. Planning and Economic Civilisation ..	256

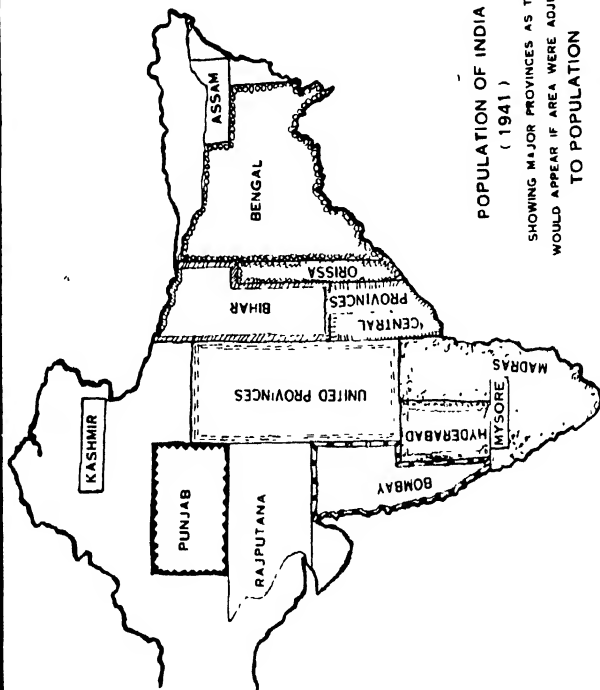


## MAPS AND DIAGRAMS

MAPS		Page
1. Population of India	..	1
2. Rivers and Forest Zones of the Dominion of India.	..	47
3. Industrial Map of India.	..	179
4. Special Industries of Dominion of India	..	196
DIAGRAMS		Page
1. Indices of Prices	..	109
2. Production Targets in Agriculture	..	112
3. Manhour Chart	..	138
4. Occupational Structure for India	..	168
5. Employment Structure in Each Economic Zone	..	235



# REBUILDING INDIA



and of bringing all the different lines of economic advance into a well-conceived plan of social security so as to reduce the area of distress and discontent prevailing among the masses which methods of mass production, standardisation of products and mechanisation of industrial manufacture have created today.

There can be little doubt that with every stride in economic progress which goes on complicating the set up of the economic civilisation in any part of the earth, the problems of 'balance' between material resources and the living-standards of the people also become highly involved. Our failure to harness the vast resources which nature has given us for building satisfactory living standards for the forty crores of people inhabiting this vast and ancient subcontinent must be judged against the background of world economic progress. And the judgment that results from such a study is, indeed, of relative significance. No other country, possessing resources to which we can lay claim, has failed to use them to build up a satisfactory standard of life for its people. Poverty has not, fortunately, been the uncontested monopoly of Indians alone today. There are parts of the world which are presenting pictures of poverty, in a magnificent surrounding of economic progress, like Yugoslavia, Roumania, Greece, Poland and, to a small extent, Czechoslovakia, which are situated between two zones of high degree economic progress like Germany on the West and the Soviet Republics on the East. The resources of these poor countries of

Europe are, unfortunately, limited and the political and social storms that have swept over these small countries from the east and the west have prevented any peaceful reconstruction of their economic life over any appreciable span of time. Naturally, they are today the veritable 'pockets' of economic stagnation in Europe, with very little chance of reaching any satisfactory pattern of balance between the development of their resources and their volumes of population.

The picture of our country is entirely different. India had been practically free from serious social upheaval or political conquest for one and a half century of 'Pax Britannica'. Nothing happened, except in the first decade of the present century, to disturb the even flow of everyday life in the country. No internal marauder swooped upon the peaceful peasant or the industrious artisan in the exercise of his occupation ; and no external enemy threatened our country either with social collapse or cultural dissolution. Naturally the country collapsed back into the cultural framework of centuries anterior to British rule. Unmolested by forces of economic advance, the Indian peasant hugged, like the urban artisan, to his traditional implements of agriculture ; and with the dissolution of internal disorder and external aggression, the 'positive checks' to the growth of population, like wars and insurrections, were removed and population, freed from the shackles of all prudent checks and violent famines, jumped to a size which has today threatened the very foundations of peaceful progress and ordered prosperity.

During this last century of world economic advance, India has slumbered in an uninterrupted dream of past glory and superficial peace which the Pax Britannica had brought to this land. This naturally carried the country back several centuries in matters of economic advance. Strange and paradoxical though it may sound, during this momentous period of world economic reconstruction and advance, India had no powerful incentive for creating an atmosphere propitious for the fuller use of all the material resources which nature had placed at the command of her population.

### Poverty and Population

Poverty, like necessity, is the chemistry of all economic advance. The crisis that was slowly shaping our economic life did **not** assume a menacing size till the twenties of the present century, since all the problems that are threatening us today like shortage of food, lack of clothing, peasant distress, labour unrest, heavy congestion in the so-called industrial towns, social discontent and general cultural dissatisfaction which have stood out as major problems particularly during the war of 1939-45, were only nebulous during the earlier years of the present century and were getting their definite shape in the great war of 1914-18. If we project an increasing rate of population growth on all these forces of economic distress and social discontent, we can appreciate the full weight of

forces which have made vigorous reconstruction of economic life in the country, to ensure proper living standard for the vast population of our country, inevitable today.

Those who died in the great influenza epidemic of 1918 did a definite disservice to our country ; had they lived, our population problem would have been greater and pressed more heavily on the national conscience far earlier than during the total war of 1939-45. During the recent war, the economic system of our country revealed wide gaps in various aspects of economic evolution and converged enlightened public opinion on problems of economic planning, particularly in view of the serious situation which developed in regard to food, clothing, housing and transport and gave us schemes of economic reconstruction like the Bombay Plan, the People's Plan and the blueprints of postwar economic rehabilitation issued by the Central and Provincial Governments all over the country.

It must be clearly understood that no vigorous regulation of economic life would emerge without a critical situation developing between the pace of population growth and the rate of creation of material wealth necessary to maintain that population at satisfactory standards of living. It is only a widening gap between population and production that will create the conditions propitious to economic advance and balance in economic evolution. This is not to assert that all major inventions in the field of industrial and

agricultural technology are begot by economic necessity, but this statement only attempts to emphasise that an atmosphere congenial to economic advance can only come in the wake of a crisis in national life born of grave disparity between the rate of population growth and the basic facts of contemporary economic life. A growing population creates problems of economic balance which a stationary population can never pretend to create. Naturally it is only countries with growing populations that have made the most substantial contribution to the advance of agricultural and industrial technology in order to raise the capacity of their natural resources in men and materials to support a growing pressure of population. The economic histories of countries like England and Germany bear ample testimony to this statement.

In this sense, an increasing volume of population must be taken to be the harbinger of an era of economic reconstruction that would eventually step up the processes of industrial manufacture and the methods of agricultural production. It is one of the inexplicable paradoxes of human nature that generally men do not think of their problems until those problems begin to threaten their ways of life and begin to burn in on their consciences. One wonders if such an outlook on the fundamental problems of life was responsible for one of the most common benedictions in our ancient scripture which blessed those "who have no children to beget children and those who have children to beget grandchildren" and the



general mass of people to "live a hundred autumns"

There is little doubt that balance in human civilisation can only arrive as the result of balance between the rate of population growth and the creation of material resources necessary for good living. It is only by this process of balance that we can pretend to maintain the mass of people above want, greed and despair without which all the finer springs of life would dry up leaving human civilisation in the Hobbesian "state of nature". In earlier times, the economic problem of 'balancing' assumed the shape of adjusting existing resources, which were relatively abundant, to a population which was worn out by struggle for survival, both social and racial, and naturally manpower had a significance to the greatness of a nation quite distinct from the significance which we attach to it in an age of power and machines ; particularly in those countries where production of industrial and agricultural goods has clearly outstripped the rate at which people can consume them, creating gigantic problems of manipulating prices to maintain industries with ever-increasing powers of creation of goods.

### **Economic Crisis in India**

Fortunately, India has not yet reached that point of crisis in economic evolution, where further economic stability cannot be maintained without schemes of expansion of markets across

national frontiers. This does not give us the right to rejoice in our plight. We are suffering today from shortage of food for our growing population, shortage of clothing, insanitary housing facilities, lack of proper educational and clinical help, and, more than all these, giant waste of manpower in insufficient and incompetent occupations which cannot ensure for them either adequate standard of life or make the country lead a peaceful and prosperous existence.

Strange though it may sound, our food is the costliest in the world and it is our good fortune that three out of every four people in the country live directly or indirectly on our land resources, either as subsistence farmers or as economically unhinged landlords. Had it been otherwise, we would have witnessed Bengal of 1943 in every part of the country. The Indian rural population does not buy its food and other necessities for everyday use except salt, kerosene oil and a portion of its clothing requirements. This enormously high cost of our agricultural products arises from the fact that our agricultural methods are still centuries behind those of other countries and 'our population' has to sustain its standard of life on land resources and consequently the yield of crops per acre is the lowest in the world.

This low yield of crops per acre also brings with it a phenomenal waste of the land resources of the country. In wheat, for instance, the farmers in our country today grow only one-seventh of what is grown in England, one-sixth of that of

Germany, one-fifth of what is grown by the French and Japanese farmers and certainly less than what is grown even in small and poor countries of Europe like Roumania, Yugoslavia and Czechoslovakia. Only three countries of the World keep company with us in the poverty of their yield of crops and they are Turkey, Mexico and Spain. Even Egypt grows six times the wheat that we grow per acre of our land resources. Similarly in rice and cotton also. We have poor yields per acre. In the absence of mechanisation of agriculture and standardisation of products and in the face of low yield of harvest that we are able to gather, our foreign trade has suffered since the dawn of the present century and has reduced our capacity to maintain an adequate level of imports without which we cannot pretend to keep up a progressive standard of life for the huge population of the country.

This deplorable position of our agricultural production has created a situation in which even the vast land resources of the country are unable to ensure adequate food for the people and enough of raw materials for the industries of the country. A low yield of crops can only be balanced by spreading our agriculture over a wider area of land resources. Such a scheme of agricultural production is at all times "uneconomic" and cannot be of any good for an old country like India where the extent of land-resources, as in all countries of the world, is limited by geographical factors over which we have no control. Sooner or later, as we approach the final limits of our land resources

our agricultural production will have to face the inevitable problem of reconstruction to maintain the population or the population will have to be sustained by eternal rationing with progressive reduction of food grains from year to year, leading to malnutrition and severe economic distress.

The one factor which could have provided the proper incentive to transform our agriculture, import of cheap food grains from abroad, has been conspicuous by its absence. It would be indeed difficult to ensure adequate markets for food imports in a country where three hundred millions out of four hundred millions are, in one sense or another, subsistence farmers who have taken to agriculture as a "way of life". In other avenues of economic evolution, competition has performed the meritorious service of transforming the processes of production. Such a transformation is noticeable, in our country, in the textile industry, in the sugar industry and in the iron and steel industry, to give three examples only. It is particularly unfortunate that national short-sightedness with regard to the fundamental economic needs of the country should have prevented agricultural advance till the pressure of population on food resources had proved unbearable since the outbreak of the war in 1939.

The recent War has some grave lessons to teach us in the matter of balance in economic evolution. Heavy movements of population from rural areas into urban centres, for prosecuting war and keeping up production in industries connected

with war, increased the pressure for food from urban centres and created some degree of labour shortage in the rural areas, carrying food prices higher. This rise of food prices was steepened as the war reached its meridian and price-controls which the authorities invoked only succeeded in defeating schemes of food procurement and encouraged blackmarketing and hoarding of food-grains. This situation created heavy movements of landless labourers into urban centres in search of food and employment, complicating food problems in the regulated areas and creating severe famine conditions in some parts of the country. We have not yet recovered from the mad spiral of prices initiated during the war, nor, have we succeeded in breaking the backbone of the 'black-marketeer' who is the Leviathan that is to day eating into the economic vitals of the country.

Any adequate programme for transforming agriculture in an old country like ours presents insurmountable problems of social as well as economic adjustment. We cannot increase production of food and industrial raw materials without mechanisation of agriculture. Mechanisation of agriculture cannot be supported unless we drive people from our land resources. We cannot drive people from our lands unless we are prepared to find them alternate sources of livelihood which will balance their standard of living and compensate for their social and cultural transplantation. Such a readjustment should imply higher wages in industries than what are existing today. Such

higher wages would lead to higher prices for our industrial products unless our industries are rebuilt with upto date technical processes and mass production methods. This would necessitate the formation and maintenance of an ever-widening market for our industrial goods which is difficult to attain unless we had plans to integrate our village economy to maintain our industries and our urban economy to sustain our agriculture. Such a balance has never been achieved so far by any country in the process of its economic evolution and would lead to high degree regional self-sufficiency which would not make for progressive living standards in the country.

### **Progressive Living Standards**

Progressive living standards for forty crores of people in our country cannot be reached without world economic and financial cooperation. India cannot produce all the consumption goods which are necessary to build up progressive living standards for the people and any attempt to build our economy along those lines would only postpone reasonable prosperity for the people of the country by at least a century. The other countries of the world like America and England have already reached a high level of industrial and agricultural efficiency and are caught in the tentacles of a vicious "economy of abundance" which high grade technical advance inevitably creates. They would soon be piloted into a first class economic crisis unless they tried to

stabilise their complicated industrial and agricultural civilisation either by drastic management of prices or by commercial expansion in a vigorous drive for widening of world-markets for their industrial and agricultural commodities. Naturally, with the state of economic advance that they have reached, they would not only be able to produce goods more efficiently than us, but would also be able to offer competition to a degree, in our own markets as well as in neutral markets, to which we cannot hope to aspire for the good part of a century with the economic set up that we have come to inherit today.

Further, no scheme of economic reconstruction of the country can be implemented without heavy imports of capital goods as well as of consumption goods and money for the purchase of essential commodities for the maintenance of satisfactory living standards during the period of economic rehabilitation, if we are to reach our objectives of industrial and agricultural reconstruction to reduce the zone of economic distress that has gripped the population today. These imports will have to be balanced by exports from our country and the magnitude of foreign trade that we shall be compelled to maintain will depend upon the nature of our schemes of economic advance and the degree of world economic and financial cooperation that we will have to invoke in order to effectively implement them.

It is idle to pretend that maintenance of an adequate volume of exports to balance the heavy

imports that we shall have to absorb to build up the economic system of our country will not affect our schemes of economic advance and carry us away from the objectives that we schedule to reach. There are only two metropolitan powers that can supply us with the capital goods and technical skill that are necessary for sustaining our schemes of economic advance: America, to a greater extent and England, to a smaller degree. Naturally, our export trade will have to be tuned up to reach import levels with these countries and we shall find it more difficult to maintain our exports with America, a country which has accumulated all the malicious features of an economy of abundance and is more anxious to raise its exports rather than to absorb imports from any other country in the world. America does not need agricultural products except rubber and our production of rubber is relatively insignificant, being confined to the states of the South, when compared with the volume of production in the East Indies. We have none of those mineral raw materials with which we can maintain our export levels with America. And surely it is nothing short of moonshine to think that we can balance American exports either with jute or sugar or cotton, when even Egypt has not been able to maintain any appreciable volume of exports in cotton and the East Indies in sugar or in rubber.

It is plain to any one who has even a superficial knowledge of Indian economic set up today that we cannot attempt to build up the economic strength of the country with internal capital, as



we have not got sufficient gold or goods to balance the heavy imports in capital goods and technical skill which are essential to carry our schemes of industrial and agricultural reconstruction to a state of successful fruition. Unless our exports are conceived as only auxiliary to full implementation of our programmes of economic advance, they would only end in distorting our economic life and plunging us headlong into an economic situation which would deny adequate living standards for the people of our country for a long time to come.

It is needless to urge that the world economic system of today is such that we will not be allowed to rebuild our economic system without absorbing heavy imports from abroad in the form of capital goods and consumption goods which are produced in abundance in America and with the economic recovery of Britain, in England. World economic forces of today would render world economic relations inevitable in reaching adequate standards of living and plunge us into a debtor position. We shall have to maintain heavy exports to liquidate the debt that we shall have contracted during the period of our economic reconstruction.

In promulgating programmes of economic advance, we cannot forget this gigantic factor of balance in world economic relations which we shall be compelled to maintain in order to reach higher living standards. We must avoid recreating problems of "abundance" and of the scramble for sources and markets which have presided over

the economic evolution of technically advanced countries of Europe. We must remember the fundamental economic limitations of our country, where over seventy per cent of the population is agricultural. Our industrial development has been haphazard, caught in the inevitable process of laissez faire economic evolution. We have still in the country large unliquidated 'pockets' of economic stagnation in small scale industries and cottage industries, not to speak of that gigantic patch of economic infection, our agriculture, which stands as a menace to any adequate 'plan' of economic reconstruction of the country to reach higher standards of living for our people.

### **Problems of Progress.**

Further, the immense social rigidities which we have inherited down through the ages complicate the work of economic and social reconstruction that economic reconstructionists may plan out to reach a new and satisfactory way of life for the forty crores of people in this sub-continent. Our agricultural production cannot be balanced within the framework of any competitive market for primary commodities: and any reconstruction of agriculture to the levels of primary production which other countries have reached would involve demobilisation of rural populations and the snapping of social and cultural relations which have existed for centuries. Such a programme of reconstruction would have to meet gigantic forces of social, cultural and economic

resistance from those whose rhythm of life is grossly challenged by schemes of economic advance. Nor can we pretend to ignore the stupendous problems of organisation of agricultural and industrial production, of marketing of our primary and industrial products, of financing our schemes, and finally of adjusting the economic evolution of the country to world economic advance without which we would recreate problems of economic maladjustment far worse than the problems of poverty and distress which exist in the country today.

Even a partial solution of the problem of poverty of the people of our country implies the erection of an economic system which must have two fundamental characteristics: (a) balancing the pressure of population through raising the capacity of natural resources of the country to maintain a dynamic standard of life for a growing volume of population and (b) keeping up a foreign trade with the other countries of the world who shall have assisted us in implementing our schemes of economic rehabilitation with capital goods, consumption goods and finance.

Any scheme of economic advance that we may plan out can easily be neutralised by forces of population progress alone. We have no means of estimating the direction of our population curves in the future years. We cannot trust that 'birth-control' methods would keep population pressures within a set framework of adjustment; nor can we deliberately reduce the volume of

population by 'race suicide' or by inciting periodic insurrections and international conflicts. Nor is there any ground for believing that improvements in the general standards of living in the country would, *mutatis mutandis*, lead to family limitations on a voluntary basis. These schemes are bound to lead to moral, psychological, biological and sociological disaster and are akin to programmes of voluntary destruction of goods to maintain prices from falling.

Heretical though it may appear, we cannot hope to increase the quality of people by regulating the volume of population. If this process of sociological adjustment were possible and desirable, it would lead to disastrous stagnation in human civilisation which would fundamentally damage the economic systems that the peoples of the world might build in their crusade for better ways of life and carry the world back to the morbid civilisation of primitive times.

The volume of population, like the scripture of any religion, must be taken to be sacrosanct. It cannot be changed in the context of any schemes that we may project. It is a 'datum' to which schemes of economic advance are to be adjusted and projection of population curves into the future may be wiped out by unforeseen forces of population dynamics like wars, epidemics, famines, migration, variations in birth and death rates which, for the most part, remain beyond the control of any human agency like thunder and lightning, storms and rain, floods and pests.

Our failure to control cyclical fluctuations in economic evolution clearly reveals our limitations in controlling population changes.

Nor can we keep any pattern of standard of living stationary for any appreciable span of time. The standard of life in any part of the world is relative to social and cultural institutions of that particular region and the forces of evolution of the 'historical spirit' which create them ; it also reflects the set up of the economic civilisation which the people of the country have built up in the process of their response to the natural resources which nature has provided them. We cannot therefore talk lightly of raising the standard of life of the people unless we are confident of creating social, cultural and economic conditions which can keep the standard of life progressive and adjust the entire civilisation of the region to maintain that standard of life from collapsing to the former state. The task is not as easy as many people imagine. It implies periodic reconstruction of regional economic civilisation to keep up the composition of the standard of life and involves the highly complicated and delicate operation of keeping regional civilisation adjusted to world forces of economic and cultural advance. The dynamics of the standard of life will not go without effecting the abolition of social and cultural institutions and the trend of the regional historical evolution. It is axiomatic that the entire framework of civilisation will have to be bent to serve the needs of a rising standard of life. In this process any single factor may create maladjustment in the process of

economic and social administration and contaminate the standard of life already reached. Such a process of disintegration of the standard of life may come either from economic change including changes in population, the methods of production, the nature of foreign trade, technical advance reducing the rate of employment, or the composition of individual incomes, or through social and cultural changes exerting pressure on the forces of economic adjustment.

Naturally, a falling standard of life is the most dangerous chemical of all social explosions. When we understand that a falling standard of life may be brought about either by forces within the economic and social systems or by world forces of economic and social reconstruction over which regional populations have but very little control, we would be able to appreciate the intricacies which have to be provided for in reaching any given standard of life and more than that, in maintaining a standard of life once reached from collapse and disintegration.

The task, therefore, of reaching a higher standard of life is less onerous than that of maintaining it from collapsing under the impact of world forces of economic and social readjustment and rehabilitation. In the task of reconstruction of standard of life what is more important is not the mere reorganisation of agricultural and industrial production, the reconstruction of the occupations, the building up of foreign trade and other specific channels of economic advance,

but the 'balancing' of the volume of population with the entire set up of regional economic system so as to ensure an adequate margin between the "money incomes" and "real incomes" and keeping the regional economic system properly adjusted to world forces of technical and economic progress.

It needs no emphasis that such an endeavour to maintain a progressive standard of life is beset with many related intricate problems for an old country with a heavy pressure of population per square mile like India, where agriculture happens to be the main occupation of over three-fourths of the entire population. The area of reconstruction of the standard of life, in our country, is immense, as it involves reorientation of the 'way of life' of over three hundred million people—a population more than twice that of the United States of America, eight times that of Britain, five times that of Germany and twice that of U. S. S. R. We will have to completely reconstruct the standard of life for this portion of the population and maintain it from collapsing, if we are to ensure ordered 'progress' for the country in the days to come. They are today suffering from shortage of food, shortage of clothing requirements, shortage of housing, lack of educational and clinical facilities and lack of adequate employment and are the victims of a degree of poverty and economic distress that has long been the wonder and despair of all thinking men.

## Economic Reconstruction

Reconstruction of the standard of life for such a vast population which has, as yet, had not even the ordinary decencies of life would imply complete overhaul of the economic system of the country as we understand it today. It would mean increase of food production to sustain the existing population with an adequate margin for the annual growth of population, if we are to concentrate on the food problem alone. The food that is grown today in the country is unable to support the population of the country for twelve months in the year. We are unable to build up any food-reserves to meet foods shortages for those years when the monsoon might fail.

As it is, the quantity of rice the we are growing can only support, under a universal and perpetual rationing system covering the entire population at one pound of foodgrains per day per capita, only fourteen crores of people in the year and wheat seven crores of people. Jowar and bajra, on the same basis, can feed three crores of people, and maize can support ten crores of people, if the production statistics of the Government give us a true picture of the total volume of grain production in the country. All the food-grains that are grown in the country can support only thirtyfour crores of people in the year, leaving the food problems of six crores of the population of the country unsolved by internal production of food-grains, leaving no margin of grain-reserves against crop failures and national emergencies.



With regard to protective food like milk and 'fats', the situation of the country has been hardly enviable. Even a small luxury like pulses can only be enjoyed by fourteen crores of people at four ounces per head per day. With regard to milk, India was the poorest country in regard to consumption and, except in the Punjab, where people consumed about twelve ounces per day per capita, even the United Provinces could not afford to go beyond a medical doze of four ounces per head per day. The rest of the country's population was in a miserable condition, the worst-served provinces being the Central Provinces, Madras and Bengal. According to the calculations of diet experts who state that an average human being must consume eight ounces of milk per day, only the Punjab was slightly better off in milk and all the other Provinces were miserably below the standard of milk requirements for a well balanced diet. Similarly in regard to fruits and vegetables which are spread over four million acres for the entire country. Except wild fruits, the majority of the population cannot afford to buy fruits with the income that they get as subsistence farmers over the larger portion of the subcontinent, nor can they afford the minimum dosage of oils and fats for the greater part of the year except in regions where oil-seeds are the principal commercial crops. Sugar is a definite luxury with the majority of people.

Similarly, the entire cloth that is produced by the organised textile industry and the indigenous handloom industry plus imports, can only

assure fifteen yards of cloth per head of population in the year. These fifteen yards of cloth per capita per annum leaves the majority of population in a semi-naked state. Even under a universal scheme of cloth rationing over the entire country, all the cloth that is produced in the country and imported today can only give each individual a pair of dhoties, a single towel and a shirt per year or a pair of sarrees of ten cubits and three blouses per year, leaving no room for either bedsheets or other linen. Before the outbreak of the war of 1939, heavy imports of cloth from Japan and Britain kept the higher classes of society well supplied with cloth and had released their share of cloth for the consumption of the people who habitually went in for indigenous cloth both mill-manufactured and hand-loom produced. With the suspension of cloth imports, it has been found impossible to make internal production go round the whole population without severe rationing of cloth and the ration system of today is so rigorous that any honest buyer of rationed cloth cannot afford to wear more than a loin-cloth on the quantity of rationed cloth at roughly nine yards per year per head.

Both in matter of food and clothing, India has been a deficit zone since the first decade of the present century and without heavy imports of foodgrains from Burma and of our clothing requirements from Japan and the other countries of the world, our economic system would have shown signs of collapse far earlier than it has actually done. The cheaper variety of cloth that

Japan was exporting to us kept us from collapse on the clothfront, though it created a first class crisis in our textile industry which continued up to the outbreak of the Sino-Japanese conflict in 1937 and, when we remember that till that period Japan continued to be our best customer for short-staple cotton, we would be able to appreciate the great service that Japan rendered to our subsistence farmers in the matter of balancing their economic problem.

These few facts regarding our basic requirements for "animal existence" are enough to demonstrate that our economic system as it exists today is unable to maintain the population that has come to our share. But for Burma's assistance in the matter of our rice-requirements, our economic system would have opened up wide gaps and the degree of economic distress in the country would have been more intense. Plainly, we cannot allow our economic system to drift along the course of non-resistance as it has done so far unless we are prepared to face a social explosion that would blow up the very foundations of our ancient civilisation.

Increase of food production, naturally, gathers an importance in any scheme of economic rehabilitation for this country which it never had in any earlier epoch of the history of our sub-continent. Increase of food production can only be ensured in two ways : (a) either by an intensive programme of land reclamation covering those areas which are not cultivated today and are

consequently lying fallow or (b) by increasing the yield of crops per acre of land-resources, so that more of our existing land resources may be released for the production of other crops with which we might build up an adequate volume of export trade to reach higher living standards for the population.

Land-reclamation for food production would be uneconomic, unless it is accompanied by fundamental changes in the methods of cultivation. Without increasing the yield of crops per acre, land reclamation schemes cannot be "financially balanced," since reclamation of land involves heavy expenditure which must be recovered from the product of the reclaimed lands, which is only possible with scientific and intensive farming. If the reclaimed land is again handed over to subsistence type of farming, we would again be caught in a vicious economic circle from which escape is not at all easy and our central and provincial budgets would not be able to balance schemes of land reclamation.

If we are to adopt scientific and intensive farming with a view to increase the yield of crops per acre in the country, land reclamation would be superfluous for some time to come at least, as scientific farming bringing with it appreciably high degree of land productivity would release a considerable portion of the area that is cultivated today for the production of other primary articles of general internal consumption as well of exports to other countries. Scientific farming cannot in-

crease the yield without our building up of large-scale farming, which alone can make our food cheaper by producing it in greater 'abundance' than has been possible today. That would make rural exodus of agricultural population as necessary as their rehabilitation in other alternative occupations, and carry us to the heart of the giant problem of seeking economic balance for this vast sub-continent with forty crores of people in the complicated economic civilisation of the present-day world.

Similarly in regard to the so-called protective food like milk, fruits, fats, vegetable oils and vegetables. Greater production and more equitable distribution of these essential articles of a balanced diet would mean reconstruction of our cattle economy, widening the area of garden land with greater spread of irrigation both surface and subterranean through canals, borewells and tanks, reconstruction of crop-schedules and the last, but not the least, management of prices to maintain as wide a market as possible for these articles and bringing them within reach of every individual in the country. In this regard, we must not forget that the chances of sustaining economies of large-scale production in agriculture are far more remote than in manufacturing industries, since the capacity of land for producing articles of food and the capacity of cattle to yield milk are under comparative limitations when compared to the capacity of an industrial plant to produce goods.

## Balance between Agriculture and Industry.

It must not be overlooked that the degree of reconstruction of Indian agriculture is limited by the industrial opportunities that we can create for the displaced population from rural areas. Urbanisation of a subcontinent like ours presents severe problems, sociological, hygienic, cultural as well as financial, besides the delicate problem of balancing of our urban economy with internal as well as international economic evolution. Providing alternative occupations for the greater portion of the three hundred million people who have so far maintained themselves on subsistence farming is a gigantic task. We must build up industries to absorb them. We must ensure them sufficient wages. We must go on progressively widening the market for the goods of the industries that we start. We must manage prices of industrial products to bring them within reach of the majority of the population at home ; and maintain wide markets abroad. We must find capital goods and financial resources to build up these industries and we must create conditions which will ensure continuity of production, without which employment rates cannot be maintained. We must regularise industrial labour-markets. We must provide technical and scientific education for the population to suit their avocations and prevent undue movements of labour from one occupation to another. We must guard ourselves against undue price-changes by regulation of the movements of goods, which might destroy the economic balance of any region. These are some

of the problems that we shall be called upon to solve if we are to reconstruct our agriculture to maintain the existing population of the country at reasonable levels of comfort.

Each line of economic reconstruction presents a string of problems peculiar to itself. If we take clothing, our textile industry will have to be reconstructed to increase its production to three times its present level without increasing the price of cloth. Such a reconstruction of the textile industry cannot be achieved without the installation of upto-date textile plant. The greater the degree of technical advance in any line of production, the lesser will be its capacity to absorb labour and no scheme of reconstruction of occupations can be adequately implemented if we aim at greater production without any fundamental change in the price formations for the products of industry. Naturally the industrial system will be unable to absorb any great portion of manpower which will be released by programmes of agricultural reconstruction. We shall have to face either growing unemployment as a result of high degree technical progress in industrial production or rising spiral of industrial prices as a result of greater portion of manual labour in industrial production with a market which would go on contracting for our industrial goods. Maintaining a balance between the capacity of the industrial system to absorb a growing volume of labour and at the same time reducing costs of production with up-to-date processes of production with high degree technical advance is one of the unsolved

problems of economic administration and, if we are to reach satisfactory standards of life for the people of the country, we shall be called upon to strike such a balance in economic evolution.

Throughout the process of economic advance that we might adumbrate for the country, it is necessary to remember that no lasting reconstruction can be maintained without ensuring for the section of the population in the working age-groups continuity of employment, continuity of income and a sufficient level of wages. Without these things no satisfactory standard of life for the people of the country can be reached, much less maintained for any appreciable length of time. Continuity of employment cannot be ensured without making production continuous; and, paradoxical though it might appear, continuity of production means up-to-date technical progress and technical progress is one major factor which acts as a powerful dissolvent of employment rates. We must maintain employment-rates either by stabilising technical progress or by opening new industries which will be able to balance the loss in employment in the other industries. Such a process of readjustment would mean "stabilisation" of the labour market and incessant adjustment of employment-rates, wage-standards and incomes in different lines of production. It is not easy to find out new industries which absorb the volume of labour which technical advance in an industry like the textile industry in India might release on the labour markets of the country. Such an evolution in the matter of employment



would leave no margin of employment for the people that grow up into the "age-group" from 15 to 60 every year and will create conditions of employment instability where a falling standard of life becomes inevitable with grave consequences on the social and cultural solidarity of the country. The economic consequences alone of such instability of employment among those sections of people who have no other alternate means of occupation are, by themselves, sinister.

Suppose we did not incorporate technical progress into our industrial system by setting up up-to-date plant and increase of production, in an endeavour to keep up continuity of employment and the existing employment-rates undamaged. In such a situation, as long as our economic system remained "open," with free and unrestrained foreign trade, the higher prices for industrial goods would flood our markets with goods produced in other industrial countries with more efficient plant and our industries would be unable to stand up to competition. The history of the Indian textile industry in the decade preceding the outbreak of the war of 1939 under the impact of Japanese competition clearly illustrates the truth of the foregoing analysis.

If we are to impose tariffs—import duties to maintain prices of industrial goods, so that our industries with their employment rates might survive foreign competition, we would damage our economic evolution in two ways : (a) we would loose our markets abroad in the stampede

of a tariff war and reduce our exports and consequently, sterilise our reconstruction plans to that extent and (b) we would bring down the standard of life for the people of the country by shutting them away from cheap twentieth century goods and de luxe goods manufactured in other countries.

The grave consequences of such a method of economic administration become patent when we realise that a rising standard of life for the people must be maintained, not by increasing incomes and raising wage-rates in terms of money, but by producing and selling industrial goods and other necessities of every day use, cheaper. In other words, we must maintain higher living standards, not by raising money incomes and wages which would only create inflation and economic crisis, but by raising real income and wages through cheaper industrial and agricultural goods by methods of efficient, up-to-date production with the most modern industrial plant and agricultural machinery that we can buy from the technically advanced countries of the world, and at the same time, maintain employments-rates, wage-levels, and profits from falling by keeping the industrial system properly adjusted to the changes of a market with falling price-fluctuations. In short, we shall have to balance the industrial system of the country properly with three aspects of national economic evolution by : (a) maintaining employment rates from falling, (b) maintaining income and wage-levels from shrinking, (c) maintaining productivity of industries from being

damaged. More urgent that all these, we shall have to maintain our industrial system internationally competent, as without competing power we will not be able to maintain exports to pay for the capital goods and money which we borrow from abroad to build up the economic system of the country.

Naturally, these foregoing observations on some of the fundamental aspects of economic reconstruction of our country definitely emphasise not only the need for schemes for stepping up production to levels which it had hardly dreamt of reaching, but also for balancing the gigantic and complicated structure of agricultural and industrial production that we might set up with adequate employment rates, incomes, wage-levels, and price-formations in industrial and agricultural markets without which neither a progressive standard of life for the population, nor even the solidarity of industrial and agricultural systems that we set up can be sustained for any length of time.

The task of raising the standard of living for the population of the country is not so difficult as that of maintaining it undamaged by forces of disruption both within the country and from abroad. Increase of production both agricultural and industrial—is relatively a less difficult task than that of balancing the economic evolution of the country with the forces of world economic progress to sustain the standard of life that we might reach in our attempt to reconstruct the economic

life of the country. We can mechanise our agriculture by dissolving the uneconomic holding that exists today. We can build up industries to absorb population released from the land resources of the country. We can erect urban centres. We can lay out new routes of transport, both automobile and railway. We can project giant schemes of river valley and river basin development. We can tap the power resources of the vast rivers that flow across the country and settle prosperous populations in the areas newly developed. We can more efficiently conserve the existing mineral resources of the country and develop new mining industries. We can, in sheer statistical terms, show considerable increase in material income from the base income calculated so far. But all these improvement that we may project and implement will not guarantee a higher standard of life without our endeavour to balance these schemes of material advance, first with the dynamics of population in the country and second, with the forces which determine world economic progress, without which any schemes of development of resources of the country that we may plan out are sure to be effectively neutralised.

When we consider that we shall have to balance the living standards of four hundred million people with the resources that we possess today within the country and against the background of world economic progress in the days to come, we would be better able to appreciate the magnitude of the task that we are attempting. So far as our country is concerned, we have to

start practically with a blank sheet. Our agriculture has been practically untouched by forces of economic advance or technical progress. We have a few industrial centres which have betrayed all the morbid symptoms of human squalour and exploitation reminiscent of eighteenth century European industrialism. We have a transport system which has given a twist to the economic civilisation of the country which must be unwound before we can hope to put the country on the road to economic progress. Our financial resources to sustain any high degree economic development of the vast manpower and material wealth of the country are woefully slender. Our population-pressures are an economic despair. The mobility of people between regions or between occupations is slovenly and haphazard. The psychology of the population enshrined in the framework of cultural tradition which reaches back to the mist of antiquity must be transformed before the population can be prepared for a gigantic drive for programmes of economic advance. In short this ancient country will have to be rejuvenated and its ways of living be adjusted to the 'ways of life' of the modern world.

### **Limits to Economic Advance in India**

There are definite limitations to the degree of economic advance that we can afford to reach and these limitations arise from several factors to which our schemes of economic progress must be adjusted if our schemes are to be properly imple-

mented : (a) we will have to decide on priority of schemes of economic advance : whether reconstruction of agriculture should have priority over reconstruction of nonagricultural occupations or remodelling of transport ; (b) the high pressure of population on our land resources and the complexity of the panels of the land tenures which will place definite limitations on our schemes of economical rehabilitation must be dissolved ; further (c) the task of maintaining high employment rates in industries to balance population-pressure to reach higher living standard will impose limitations both on the type of industries that we can develop and the scale of production that can be reached ; (d) the cost of urbanisation together with the sociological and cultural problems connected with urbanising an essentially rural civilisation will affect the degré of concentration of industries and the economics of 'scale' and specialisation that we may hope to recover from our schemes of economic reconstruction. (e) The problem of marketing our agricultural and industrial products and that of maintaining an adequate volume of exports to pay for capital imports will drive economic evolution to channels least anticipated and complicate the task of balancing. (f) The forces of world economic progress and international competition, which we cannot avoid, will necessarily enforce certain limitations on the economic stature that we can hope to reach for the country. These are some of the major forces that will impose definite limitations on the nature and course of economic evolution that we might plan for our country.

Nor can we forget that no uniform plan of economic development can be successfully implemented for this vast subcontinent. The task of reaching and maintaining economic balance for the living standards of four hundred million people must be recognised as almost superhuman. We must not forget, in our enthusiasm for economic advance, the special social, cultural and economic personality of different regions, their special limitations in natural resources, and the level of living standards which they can reach in the context of their regional problems and possibilities of social and economic readjustment. The responsibility of balancing economic evolution for a country like India against the background of world economic advance must emphasise the urgency of seeking a regional approach to the problems of economic reconstruction in our country.

In such a context, we cannot expect the country to reach high living standards in one gigantic stride of economic transformation. We must carry the vast population of the country by programmes of regional economic rehabilitation and by a careful and well-planned pattern of economic coordination to a state of economic evolution where the living standards of the people may be raised and maintained at progressive levels in the days to come. Such a pattern of economic advance would imply : (a) economic conservation of agricultural as well as industrial resources in each region (b) harnessing of man-power in each region to maintain higher living standards for the population; (c) development of interregional trade

in specific goods and services; (d) programmes of regional price-control to prevent undue movements of men and goods to keep regional schemes of production—agricultural as well as industrial—from being damaged by heavy movements of goods and labour from regions of lower price and wage-formations ;(e) integration, at a more advanced stage of economic reconstruction, of regional economic evolution, first with the rate of economic advance in the other regions of the country and second, with the rest of the world.

#

It is evident that we have to recreate the economic history of the progressive powers of the world in the last centuries in our country, with its heavy population pressures in the next few years and at the same time preserve the social and cultural personality which the march of the human spirit through the ages has granted us and without which the cultural heritage of the country would vanish. This task of reconstruction cannot be performed without an appreciable degree of decentralisation of economic evolution. India is not a small country like England in the eighteenth century or Japan in the nineteenth. The economic climate in which England built up her industrial and commercial greatness has vanished today yielding place to a world-wide spread of industrialisation and technical progress. Nor can we tread the path of economic expansion without blowing up the foundations of our economic and political security. Nor can we, with a placid conscience, reproduce the giant problem of social and economic balance which are today



disturbing the even cultural progress of a country like the U. S. A. which, in spite of its enormous advance in economic civilisation, has failed to preserve the main springs of general human happiness and prosperity untouched by forces of economic distress and social unrest.

If we plan for sheer increase of production in our schemes of economic advance, we shall be reproducing in our country all the grave sociological and cultural problems that have undermined the civilisation of the so-called progressive powers of the world today. We have already our great problems of cultural balance. We have till today rested in the backwaters of economic stagnation. Our population is in a miserable plight. Our living standards are the lowest. We have failed to harness the giant natural resources of the country or its huge manpower to create better patterns of living. These data are the result of lack of any adequate target in our civilisation in the past two centuries and the change of emphasis in national life which our contact with the western countries has imposed on us. We have lost the old ways of life. The new mode of living which was imposed on us has failed to give us any objective in cultural evolution which might create better patterns of living. The population of our country has naturally groped in this ever-deepening twilight of an eternal transition, afraid to give up old traditions and ways of life sanctioned by them. A compelling new "tradition" that can guarantee better pattern of living for the forty crores of people has been absent. The march of the histo-

rical spirit in India in the last two centuries has not been compelling or daring enough to induce in the majority of population a desire to change their "design for living" in the light of the new forces of world progress.

It is one of the special demerits of subsistence living that it rarely encourages a spirit of adventure which is essential for economic advance. Even today, it is doubtful how far the desire for economic advance has permeated the seven hundred thousand villages of the country where the rigours of rationing are unknown and the mad spiral of prices is impotent to inflict its privations. Any change in the pace of economic advance would radically change the pattern of living in the rural areas of the country and we must not forget that unless we can provide the rural population with an overpowering objective of economic advance, any schemes that we may project for reconstruction of agriculture or for reconstruction of industry either through management of prices or through the manipulation of price-formations may be effectively sterilised by the mysterious forces of subsistence type of economic administration of natural resources which has caught the major portion of the population in its grip.

In such a social, cultural and economic climate in which forces of economic advance may easily be sterilised over the rural areas we shall have to proceed with a great deal of caution. Such an approach to problems of economic reconstruction would combat the creation of large-scale indus-

tries with new industrial centres, of labour colonies with plenty of living space and of wage standards to maintain relatively high living standards in the urban areas to compensate the social and cultural agonies which attend transplantation of rural populations. So far rural populations have been "pushed, not pulled" to the industrial centres of the country and the labour-markets are flooded with economic or social fugitives from the rural areas who are at heart, always rural and try to return to their native village at the earliest opportunity. It is not possible to create urban centres which will 'pull' the rural population with their attractions and build up a regular industrial population in a country like India, without unduly increasing the cost of schemes of economic reconstruction and rehabilitation.

Another factor which effectively challenges reconstruction of the industrial system of the country on 'large scale' is the heavy density of population that we have today accumulated. Areas of heavy density of population with special emphasis on agriculture will have to reach higher living standards only by increasing employment-rates in non-agricultural occupations and the capacity of large-scale industries, with up-to-date plant, to absorb labour at adequate wage-levels is severely limited in view of the mechanisation of all important productive processes. Large-scale production, in essentially agricultural tracts of the world, will not balance the occupational structure or ensure high employment rates or even higher living standards for the population displaced from

the land-resources under the promulgation of better methods of farming. Scientific farming cannot be sustained without increase in the size of the farm and the building up of large-scale agriculture. Large-scale agriculture would create heavy unemployment among subsistence farmers as mechanisation of agriculture progresses. It is indisputable that in old countries with heavy population-density, large scale agriculture cannot be balanced with 'large-scale' industries as that would leave huge blocks of manpower unabsorbed into the industrial system and create the giant problems of unemployment and social distress.

This perspective of the problems of economic balance clearly indicates the lines of economic evolution in two demarcated channels : (a) we can balance a reconstructed occupational system only under a scheme of decentralised industrialisation ; (b) all schemes of economic reconstruction must have a regional approach with provision for regional schemes of economic reconstruction for being incorporated into the coordinated plan of economic development of the subcontinent. Any other pattern of economic advance cannot pretend to be realistic in view of the difficulty of adjusting continental schemes of economic reform to sustain the living standards of the huge population of the country and dissolve the fundamental social and cultural differences between two regions. In such a context, economic reconstruction must be severely related to the way of life of the regional population, the

material resources which they possess and the social and cultural traditions which they have come to inherit. The task of schemes of economic advance must first be directed towards changing the rural environment which has today gathered the moss of centuries and prepare the rural populations of the country to the strenuous life of higher degree economic progress. Without such a change, the schemes that we may adumbrate may collapse, in the absence of adequate and predictable response to changes in the methods of production or prices that might be promulgated to reach higher standards. Unless we dissolve these 'pockets' of economic resistance, economic reconstruction schemes would soon be neutralised in a welter of social and cultural confusion.

### Assumptions of Economic Change

All schemes of economic reconstruction are based on certain fundamental assumptions that a given change in economic administration produces a definite change in the organisation of economic life and all economic advancement is founded upon change and adjustment to that change producing understandable results. If the results of a particular change cannot be estimated within reasonable limits of approximation, planning of economic life would be impossible. A rise in prices of wheat is expected to create certain changes in the movements of wheat as well as, if the rise persists, in the volume of production of wheat. Similarly the rate of production also

exercises a definite influence on price-formations. These are the basic assumptions which can easily be falsified, by external forces over which those in control over the functioning of particular aspects of economic life have no effective control.

Our country presents the setup of such a zone where external influences may clearly upset the balance in economic evolution; because the fundamental forces of evolution in subsistence economy are entirely different from the fundamental forces of equilibrium in market economy with which we are all familiar. Naturally, we shall have to change the contours of rural economy that exist today and dissolve the forces which determine the dynamics of subsistence economy.

It is here that we are face to face with a monster problem of economic as well as cultural administration, since dissolution of subsistence economy or even partial neutralisation of forces operating under subsistence economy cannot be achieved without the creation of a considerable degree of social agony and cultural distress in the rural areas of the country. This would render the initial point of economic reconstruction highly nebulous and shifting. How are we to implement our schemes of economic advance ? Where are we to start reconstruction of the economic system ? Should we start with industrialisation schemes ? Or should we start with river valley and river basin projects ? or with agriculture ? or with management of wage-formations ? Should we ignore all these and initiate regulation of sectional

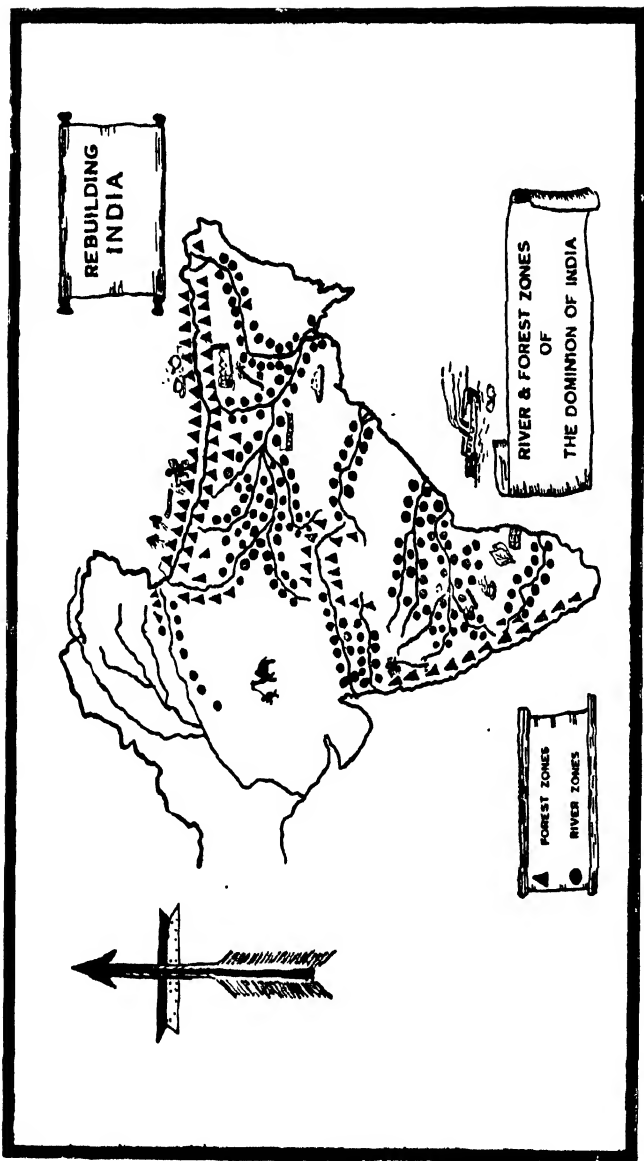
price-formations and approach our schemes of economic advance from the centre ? Should we begin with regional schemes or should we start with readjustment of the general economic framework of the country?

These questions will stand out as we approach problems of economic reconstruction from the view point of an economic administrator. The urgency of reconstruction of the economic life of the country cannot be ignored today. We have reached the cross roads of civilisation. The country is in the birth-pangs of a new political system and in the ferment that has accompanied the birth of the two dominions, new gigantic problems of rehabilitation and recovery are converged on the horizon, bringing with it more complicated problems of economic and cultural balance between the two dominions and the resources that have come to thier share and the volumes of population that they have attracted to themselves.

These and allied problems will be dealt with in the accompanying pages, in the light of the reconstruction proposals that are necessary if our country is to reach higher living standards for its population.







## BOOK II.

### POPULATION AND AGRICULTURE.

#### Density of Population

That if India were a sparsely populated subcontinent, the problem of economic advance would have been simpler, is a statement which can hardly be challenged. If India were sparsely populated, she would cease to be India as we know her. Her soil would not have been fertile. We would not have had so many rivers flowing through the length and breadth of the country forming picturesque valleys and richly cultivated deltas. Her climate would have been bleak and dreary and her contours rugged and uninhabitable. The population that a country accumulates either through natural increase of births over deaths or through migration from other regions of the earth depends on, and is determined by, the attractions in living opportunities which are provided by the natural resources of the country and the climate that it commands.

India, her resources and climate, her riches and splendour, had been the envy of rapacious neighbours and ambitious foreigners from time immemorial, even as her present poverty is the despair of all planners. The rich Indo-gangetic plain, the verdant valleys of the Himalayan zone, the rich river basin areas of the Ganges and the

Brahmaputra in the east and of the Kistna and the Cauvery in the south, the vast trap soil areas and the red-soil zones of the Deccan Plateau, the virgin table-lands of the Mysore State and of the Blue Mountain zone, the cocoanut and palm regions of the west coast comprising of the Canara districts of Bombay and of Madras and of the enchanting Cochin and Travancore States—have all attracted heavy populations to themselves.

The density of population is thus related to the fertility of the zone and the resources in land and water that are available. The Chagai District of the bleak and rocky Baluchistan has only one person per square mile while the richest tracts of the south-west coast have gathered a population density of 2000 persons per square mile. In the entire expanse of our subcontinent two zones have accumulated very heavy density of population and they are : Bengal in the East and Cochin and Travancore States in the South-West corner of the peninsula where the average density is over 600 persons per square mile. The Dacca division of Bengal has a mean density of population of over 950 persons per square mile, being heavier than that reached by the heavy population regions of the peninsula. Perhaps the highest density of population for a rural area in the whole world, is reached by Lohaganj thana which had as early as 1931, 3228 persons per square mile. The other highly populated zones of the country are the United Provinces, Bihar and the Deccan Plateau. Even in these areas, density of population varies from region to region with the abun-

dance and paucity of natural resources, the climatic set-up and the nature of crops that can be raised on the land resources. Thus in Assam though the mean density of population is 137 per square mile, it rises to 438 per square mile in the Burma Valley and drops to 171 in the Brahmaputra Zone. Similarly in Bihar and Orissa provinces the density of population is as high as 970 in the Muzzaffarpur area and drops to about 45 in the Rairakhol region. In the Central Province, density of population swings from 492 per square mile in Katghora region to 16 in the Ahiri zamindari. In Madras, the Godavari regions reach a density of population which is higher than in the Malabar areas, with 660 persons per square mile.

These few basic facts about the density of population distributed over the country definitely point to certain fundamental factors which must be seriously considered if we are to reach any balance between population and the development of the country's resources to maintain that population at satisfactory living standards. High density of population for a country where over seventy per cent of the total population is dependent on agriculture suggests that land is very heavily subdivided into plots which cannot be cultivated on 'economic' standards of farming, that the peasantry is poor, that the people are chronically undernourished if not grossly underfed, that they are hopelessly sunk in poverty, that there are scant chances for the majority of population to have any of the basic needs of good living and that they lack opportunities for self-improvement.

We can get a faint glimmer of the magnitude of peasant poverty in this subcontinent when we conduct the simple experiment of settling about 300 persons on about 600 acres of land of average fertility with little of irrigation facilities and attempt to provide them with all the prerequisites of high living standards out of the produce of 600 acres with no mechanisation of agriculture and with few industrial opportunities to supplement the income from land. That is exactly the situation in which the major section of the population of the country is placed today.

### Population Pressures

No consideration is yet taken of the rate of growth of population; and the progressive intensification of the pressure of population on the national resources with the passage of years. A study of the trend of population-growth in our country in the last fifty years shows that though population will continue to grow ever in the coming years, the aggregate additions to population will be at a diminishing rate. We have today accumulated a volume of population which is showing itself in giving abnormal density of population in the country with serious consequences on living standards of the people. Even a slight rise in living standards can only be supported by phenomenal rise of prices which would increase the income of the subsistence-farmers without inflating their own expenses of living. Two world-wars within one generation, mad spiral

of prices, abnormal world-trade, international economic crisis crippling our competitors for considerable periods of time--all these have enabled the country to maintain its heavy population.

Lest it might sound incredible, it might be urged that any research into the economic condition of the rural population in the last thirty years would reveal that the Indian peasant has always been prosperous during periods of world catastrophe and economic crisis than during times of world peace and goodwill. A war produces a situation in which our peasants prosper because war-time abnormal prices can well balance our agriculture which is the costliest type of farming in the world, while during a process of peace-time readjustment, our peasants would collapse back into their former state of economic distress and poverty. The same is true of the recent war of 1939-45. Those who are hit by the mad spiral of prices to-day are, certainly, not the subsistence farmers of the country, but the urban population, particularly the black-coated proletariat, the salaried sections of the urban population, and in the rural areas, the landless labourers who number about forty millions.

These trends in the economic situation of the population have definite bearing on the future progress of population. The heavy pressure of population that we are seeing today in the country can not only mean that our birth rates will increase, but that our death rates will increase faster, since huge blocks of population will have to live on

“sub-nutrition” levels of food, unless something is done to increase the tempo of economic change in the country to raise the living standards of the people.

We have, consequently, reached a state of affairs in which the rate of population-growth in the country cannot be maintained, and sooner, than later, our population is bound to be diminished by malnutrition, epidemics, internal insurrections and natural decrease in birth-rates and increase in infant mortality, not to speak of the social and cultural distress which will poison the very springs of our civilisation.

Our population problem is entirely different from the problems of population in the over-populated zones of Europe like the Balkan and Aegean countries. India is not over-populated in the sense in which those countries are over-populated. India is suffering today from lack of balance between the rate of population growth and creation of material wealth from the virgin resources which nature has provided the country, to maintain her population at higher standards. If we can reconstruct our agriculture so as to raise crops per acre which other countries are growing today, we shall be able to support not only the existing population, but also make ample provision for the normal annual additions to the population of the country.

One important aspect that we must recognise with regard to our future population is that as

we go on raising living standards in the country, with better balancing of regional diets, provision of clinical facilities, control of public health, more sanitary rebuilding of rural areas, and the construction of new cities, we shall have to provide for a greater rate of growth of population. 'A rising living standard', will not necessarily lead to limitation of families, unless such economic advance is accompanied by greater urbanisation of the subcontinent leading to sterilisation of vast blocks of population by social diseases, that we see today in big cities like Bombay, Calcutta, Cawnpore and Ahmedabad. And the plans that we may project for the control of public health and rural sanitation, maternity and child-welfare schemes and better-balancing of diets would all reduce the death-rate in the country by controlling epidemics, raising the resistance of the people to diseases like fevers, malaria, beri-beri, kalazar cholera and plague and effectively control infant mortality rates.

It is plain that we cannot have in India, the vast urban development that has occurred in the progressive countries of the world like England, America, Japan and Germany. The reasons are obvious. India cannot hope, for ever, to balance her heavy population pressure with 'heavy' type of industrialisation. India does not possess resources for the building of heavy industries. Heavy industrialisation would prove 'economically' costly for the country : firstly, because new markets for heavy industries like locomotive factories, ship-building and automobile industries and aircraft



manufacture cannot be economically balanced as, without a growing market, we cannot 'maintain' these industries ; and secondly because the capacity of these industries to absorb labour is definitely limited and they will not help us to balance the heavy pressure of population that we have accumulated today. Consequently development of heavy engineering and chemical industries can only come after the country has reached a definite state of economic development, when the problem of balancing the population pressures will have given place to the problem of maintaining the industrial system efficient from international standards of technical advance.

### **Balance between Population and Progress**

Naturally, till the end of the present century, our attention will have to be focused on the problem of balancing the heavy population pressures with schemes of regional development of material resources like more efficient use of our land resources through development of irrigation facilities and the application of up-to-date methods of farming, the development of dairying and the culture of fruits with extension of garden lands, the balancing of land resources between food and commercial crops, the development of regional mineral and industrial resources and, above all, the fuller utilisation of the regional volume of manpower to reach higher standards of living by exploring new channels of agricultural and industrial development.

It must be admitted that we cannot aim at spectacular schemes of technical reconstruction of the country through the building up of heavy industries, the development of giant harbour schemes, the construction of imposing urban centres with provision for the most up-to-date urban amenities like tramways, tubeways, trolley buses, and escalators, and a vast network of trans-continental airways which would carry passengers from the Himalayas to the cape of Comerin in the short span of few hours. Such schemes of development are possible in a country where population is sparse and natural resources are yet virgin, where a young nation is just spreading its wings into the stratospheric heights of technical advance, unimpeded by the weight of any kind of economic responsibility to a vast and incapaciated population condemned to sub-human living standards in the middle of the twentieth century like India.

The task of economic reconstruction in our country has to be more solid and less spectacular. In order to implement programmes of economic rehabilitation of the vast population of this sub-continent, we shall have to split up the country into zones, sub-zones and regions and closely circumscribe the area of economic administration. In this task we must remember that nothing should be done to tamper with the social and religious susceptibilities of the rural population or their peculiar psychology which looks at all change in the design for living as fundamentally wicked, if we are to save our schemes from internal sabotage. It is not at all an easy task to break up

the mechanism of resistance to economic change which the rural populations have inherited down through the ages or to promulgate any programme of reconstruction which would fundamentally damage their psychological set ups or the emotional frame-work which governs the relation between the individual peasant and his ancestral village.

Before we rebuild the economic fabric of the rural populations, we shall have to prepare them for the great change, not through propaganda vans or visual education or magic lanterns, but by solid schemes of village reconstruction like the starting of new industries, building up of inter-village roads, improving transport facilities, construction of maternity and child welfare wards and agricultural implements. The priority panel in the schemes of economic reconstruction and rehabilitation cannot be determined on any system of paper calculation but must only be framed in relation to the locality and the peculiar circumstances prevailing in each zone; and in each region. Our country, unfortunately, is not a homogenous cultural or social or even economic unit; each region has problems which are peculiar to itself and any scheme that we might adumbrate without reference to the regional context in which it has to be implemented is bound to be sterilised in a welter of sociological and psychological storms brewed by the regional populations.

These words of caution are necessary because the scheme of living in the seven lakhs of villages

in the country has to be essentially changed, if we are to balance the pressure of population on the regional resources. No scheme for higher living standards for the country can be implemented without reducing the pressures of population on agriculture as a means of living. Our agriculture must be balanced with the agriculture of the other countries of the world, and our food must be made cheaper than what it has been so long, if we are to reach higher living standards for the population and to dissolve the enormous degree of poverty that has haunted the lives of forty crores of people in subcontinent. This cannot be done without reconstruction of the occupational structure and the building up of an employment scheme which shall ensure for every man that is born in the country a future of reasonable security and adequate living standards. And any change in the occupational system in a country in which three out of every four persons are agriculturists and are shut up in the steelframe of subsistence economy with all the fatalism and resistance to change which it involves, would mean a great change in the general scheme of life for the thirty crores of people in the land, in their ways of life, in their fundamental rights and duties, in their outlook and in their approach to the main problems of living. There is no society yet in this world which will brook such a drastic transformation in its established ways of life without offering resistance to the forces of change. And any resistance from the people is sure to fundamentally alter the very contours of economic development that we may plan.

These immense practical difficulties in the task of actual economic administration would undoubtedly reduce the tempo of economic advance in the rural zones of the country and contaminate any powerful schemes of industrial reconstruction that one may adumbrate for the country. If India were handed over to the dictates of an omnipotent Economic Dictator who would sweep aside all the sociological, emotional and institutional cobwebs that have enmasked the vast population of the country from time immemorial in a grand drive for higher living standards, with a mere sweep of his sceptre of unchallenged authority before which the masses of human beings would bow down from the Himalayas to the Cape of Comorin, economic advance can undoubtedly, proceed at a tremendous speed unhampered by the bitter memories and institutions which the Indian historical spirit has created in its march through the ages.

The Indian population problem is consequently the problem of the Mountain and Mohamed. We have to create a new economic climate in the rural zones of the country and closely study the reactions which the new climate will produce in the placid sociological and psychological 'designs' of rural life. This sets definite limits to our schemes of economic advance to reach higher living standards and to the schemes of location of regional industries and to any changes that we may propose in the composition of the occupational structure. We cannot build new cities and ask the population to move in; the fact is they

wont move in. There are only two forces which create mobility of populations in our country: economic pressure in the shape of direst poverty and distress of unbearable magnitude and social and psychological pressure, in the shape of social ostracism or fear of life and property due to apprehensions of persecution either social or political or religious—which have created caravans of refugees today. Attractions of urban living or of higher wages rarely create even inter-regional movements of population, let alone inter-provincial migrations on any appreciable scale. This enormous resistance in the movements of population to wage-changes or to new industrial opportunities would create enormous difficulties in the way of effecting any appreciable change in the occupational structure and would imply readjustment of schemes of economic advance to meet this peculiar economic phenomenon of a subsistence type of economic evolution.

### Schemes of Economic Advance

This would mean that we shall have to take our schemes of economic advance to the 'very doors of the peasants, so to speak. We shall have to start industries in the villages, we shall have to transform the country-side by greater utilisation of rural land and mineral resources, we shall have to give them not only seasonal but also permanent industries (perennial industries) to rebuild their income-structures. Again, we shall have to provide them with new materials and take the finished goods off their hands for marketing,

until local enterprise is sufficiently mobilised. We shall have to promulgate scheme which will slowly, yet imperceptibly and fundamentally, change the economic structure of the village and weave it as an essential design into a gigantic continental pattern of economic progress.

Such an evolution would have to make provision for an effective compromise between economic autonomy of the village and continental planning of economic evolution in the years to come with higher living standards as the moving target of all schemes of economic advance. It is only thus that we can prevent the schemes of economic advance that we project from being caught in the toruado of the inscrutable economic resistances of subsistence economy. These resistances are not negligible and may well paralyse schemes of price-stabilisation and regulation of production through management of price-formations. Thus under the impact of subsistence economy, a rise in prices may cause increase of production at one time while at another it may create greater shortage of goods falsifying all attempts to reduce rural economies into a set of predictable economic quantities and phenomena. If such 'erratic' and unpredictable phenomena begin to appear in the field of economic administration, no scheme of economic advance can sustain itself, and all schemes of economic advance are likely to be condemned to the fate of the ameliorative measures that have so far been promulgated in the Indian village in an attempt to improve the economic condition of the peasant.

These resistances which are peculiar to subsistence economy render planning of economic evolution eminently regional, if it is to be successful, and would necessarily postulate for the economic autonomy of each rural unit. Naturally the framework of economic administration that we can set up for the entire country will have to make provision for the existence of a degree of economic autonomy of the rural unit without letting it infringe on regional planning schemes or on the pattern of economic evolution that we might adumbrate for the whole country. Such a process of economic administration will follow the course of least resistance and effectively liquidate the major rigidities of subsistence economy, though of course it would stultify the regional economic system that we might plan to build up to reach higher living standards for the regional populations. Quite obviously, seen in this context, we certainly cannot begin with a drastic transformation in the technique of agriculture to reach the rising target of production necessary to sustain the existing volume of population. That would render the intergation of agricultural holdings and the liquidation of proprietary rights in land-ownership inevitable which, incidentally, is a programme with far reaching effects on the sociological and psychological set-up of rural populations and create terrific resistance in the rural areas. The path of smooth adjustment of this particular problem of land administration can only be met by promulgation of corporate farming where the village administration directs the organisation of agricultural production and alloca-



tes the annual produce in a democratic council of village elders. Such a scheme would imply resurrection of village councils and effective decentralisation of political authority and economic control together with complete overhaul of the Revenue Records of Rights as they are maintained today. Such a programme of rural reconstruction would undoubtedly put back the clock of political administration with democratic methods of representative government and would undoubtedly pave the way for a dictatorial administration of rural resources based on the fiction of consent as illustrated by the ballot and the voting slip and would effectively breakdown the psychological inhibitions of the rural populations for economic change in the interests of communal welfare and prosperity. It must be recognised that economic democracy in the sense of individualist disposal of productive resources under the operation of the unwritten laws of subsistence economy has brought neither prosperity to the individual nor economic stability to the community as a whole. The economic disease that has caught the Indian population today cannot be cured without a major sociological and psychological operation involving an appreciable degree of haemorrhage of old social and emotional inhibitions which forces of economic advance have so far proved impotent to liquidate. In the task of conducting a major economic operation on the body politic of the country, the unshaking hand of the surgeon is as important as the powers of survival of the society which is to bear the strain of the operation.

## New Approach Needed

In this sense the economic experiences of rehabilitation in other parts of the world become sterilised in the cold and rigid cultural climate of our country whose main springs of civilisation are as inscrutable as the erratic resistances of the rural population to forces of economic rehabilitation. We can only succeed in preparing the giant mass of human material in the rural areas of the subcontinent to face the cultural ordeals of a new economic civilisation by taking them along old routes of familiar tradition on to the outskirts of modern economic civilisation. Mere promise of higher living standards or of rising wages or of soaring profits will not transform the ancient economic landscape of the subcontinent in the course of a few years to the contours of a modern economic society. The mere thought of such a transformation is quixotic in the highest degree. Nor can we pretend to reach the economic millennium for forty crores of people by sheer increase of agricultural production, or by the building up of giant industries, by the laying out of a network of transcontinental transport system with automobiles, 'silver arrow' trains and airways, or even by the construction of new urban centres with enormous living space for the metropolitan populations and labour-paradises with swimming pools, cinema palaces, promenades and parks.

These vast improvements in the external attire of a continental civilisation cannot be sus-

tained without the emergence of a balanced economic civilisation in the entire subcontinent which shall be able to pay for these amenities of civilisation and would possess the capacity to go on progressively widening the area of metropolitan comforts even into the rural regions of the subcontinent. Such a civilisation must be built on the will of the people who inhabit this subcontinent. Such a will can only come with a fundamental transformation of the social and cultural set-ups of the vast population of the country. A new social and cultural set-up can only be forged on the population of the country by a judicious admixture of economic autonomy and economic autarchy, which shall pave the way for erection of an efficient regional occupational system through drastic transformation of the system of land ownership that is existing today with a view to create conditions for the mobility of labour between occupations which shall have been newly started to balance population pressures in each region with the resources of the locality to reach higher living standards for the regional populations.

It cannot any longer be ignored that we cannot allow the country's economic system to amble along the course of nonresistance, whatever the social and psychological cost of a central control of economic evolution in the interests of the economic prosperity of the vast masses of the country. Nor can it be asserted that the problem of economic balance be solved by centralised regulation of economic evolution, as the task is

insurmountable in view of the vast extent of the country and the special nature of some of the regional problems of economic administration. It is inevitable that we must plan for splitting up the country into economic zones for the purpose of economic administration and split up each zone into convenient regions of economic control consistent with the work of economic reconstruction to raise living standards for the people of the country with special emphasis on regional standards of living.

Lack of planned economic development in the past 150 years of economic evolution in the country has created vast pockets of economic stagnation which have been spreading the disease of economic distress over the other parts of the economic system of the country. A spirit of individualism and the official sanction issued to it in the State papers pertaining to land administration has created the bogey of subdivision and fragmentation of holdings which has stood in the way of any scheme of agricultural advance. Adoption of industrial technology late in the history of world economic evolution, unaided by a coherent economic policy of efficient administration of the industrial resources of the country has given us a stunted and instable industrial system which is more a hindrance than a help in any plan for the balancing of the occupational system of the country to sustain regional pressures of population on regional resources; and has, in no small degree, damaged efficient administration of our land resources in regard to industrial raw

materials like jute, cotton, sugarcane, oilseeds and hemp. The haphazard urbanization that has been created with the development of anomalous transport routes and in the wake of the rickety industrialisation that has been imposed on the country together with the banking and financial system, has so distorted the organisation of the economic life of the village that nothing but a major surgical operation can lift agriculture out of the 'subsistence' torpor into which it has sunk today.

### Objectives of Planning

The first objective of all plans of economic rehabilitation of our agriculture must be to raise the volume of agricultural production without raising the costs of farming, in order to produce more foodgrains and more raw materials for raising and sustaining the existing living standards for the people of the country. This can only be achieved by liquidation of the stagnant pockets in rural economy. Our agriculture is the costliest in the world because of the basic fact that the living standards of threefourths of the population of the country must be maintained by the land resources and this phenomenal feat of economic balance is being today performed by evolution processes of subsistence economy. Subsistence economy has no eye for the huge waste not only of land-resources, but also of agricultural products which are raised on our land resources, since production under

subsistence economy is, not for purposes of sale in a competitive market for agricultural goods, but for purposes of consumption. The celebrated researches of Dr. G. W. Carver, the great negro agricultural scientist have shown the immense potentialities of common agricultural goods and the waste products on farms. Dr. Carver's researches have demonstrated that 300 practical products can be manufactured out of groundnuts whose cultivation is enormous in our country today including cheese, candies, shaving lotions, dyes, linoleum, soap, face powder, printer's ink. Similarly, sweet potatoes whose cultivation in our country is hardly systematic, are said to yield starch, vinegar, ink-dye and molasses. Dr. Carver has succeeded in making marble out of wood, and excellent dyes from red clays from Alabama. He has also made paper from groundnut shells which are simply burnt in our country, and fibres from cotton stalks, which are flung away.

These instances only show the enormous quantity of agricultural products that are being wasted under farming for subsistence. Further researches into possibilities of utilising the other waste products of agriculture might reveal the extent of wealth that we are annually throwing away on the rural scrap heap in the form of cow dung, rice-husk, stems of harvested crops and the unused portions of oilcakes and bones. This wastage is the result of agricultural production which is organised neither for profit nor for conservation of the agricultural resources of the country,

but for gleanings the food for the day for men and fodder for the cattle of the country. Better utilisation of agricultural resources of the country can only arrive as part of a vigorous drive for the full use of regional resources in material wealth and manpower for reaching better living standards for the people.

The first problem that must be tackled in any well conceived plan for higher living standards for the people is the problem of well-balanced food. This problem presents many difficulties in the absence of a standardised diet for the entire subcontinent, and no generalisation can be attempted which will hold good for the entire country in view of regional differences in the composition of the daily food of the population. Thus the entire country can be divided into three broad food zones: the wheat zone comprising of the Punjab and the United Provinces, the rice zone comprising of the Bengal, Madras, parts of Bombay presidency, Bihar and Orissa and portions of the Central Provinces, and the wheat-cum-rice-zone or the mixed zone comprising of the northern portions of the Bombay presidency, parts of the Central Provinces and Rajasthan areas. Again we come across strata of population in every province which use inferior cereals: in parts of the Madras Province, particularly in the native States of Mysore and portions of Hyderabad, ragi predominates as the principal diet of the lower strata of population and in the Maharastrian regions of Bombay jowar and bajra constitute the principal cereals for the poorer classes.

The wheat zones consume greater quantity of milk and milk-products, while the rice-zones take in a greater quantity of spices, and the quantity of vegetables consumed in rice-zones is undoubtedly less than what is consumed in the wheat-zone of the country. Naturally, we find greater attention devoted to dairying and the volume of production of milk and of sweet meats in the wheat zones than in the rice-zones, where nourishment is sought in a little quantity of ghee with a greater balance of edible oils like groundnut and til oil; and in some cases rice is supplemented with fish and mustard oil as in Bengal and vegetables and cocoanut oil as in the West Coast of India comprising of the North Canara districts of Bombay, the South Canara regions of Madras and the Cochin and Travancore states, where cocoanut plantations are extensive and cocoanut products are comparatively abundant and cheap. Similarly, even the regional beverage varies: coffee predominating the peninsular regions of the country comprising of the plateau of Mysore, the coast line of greater Malabar and the whole of Madras Presidency up to the boundraies of Southern Bengal, while tea holds its sway in the middle class homes of Bengal, Assam, Bihar, Orissa, the Central Provinces, the Punjab and the Bombay presidency.

Nor is this all. There are marked variations in regional dietry. The Maharashtrian menu is entirely different from the Gujerati diet and both are different from Bengali dietry; and more spices predominate the Punjabi table. Similarly in the



peninsular regions, the diet that prevails in the Canara districts of the West coast is entirely different from the diet which prevails on the Mysore plateau, while Malabar culinary art can be sharply distinguished from the Tamilian as well as the Andhra arts of cooking. Even in each of these broad divisions local variations do exist and can be detected by the connoisseur in the dietry of the country; each region having certain well-marked proportions in the mixing of spices and the dressing of vegetables which distinguish it from its immediate neighbour. These variations are the result of integration between regional food products and the special nutritional requirements of the regional populations and have come down the ages as a sort of irrevocable tradition like dress and the other indispensable data of regional living standards of a population which has, from time immemorial, attempted to maintain the patterns of living, sanctioned by available regional resources under mixed farming that prevailed in each region to keep up nutritional self-sufficiency of each rural unit as far as was practicable.

Quite recently, commercialisation of agricultural production which has dictated the crop schedules persisting in each region has resulted in dismantling the framework of mixed farming which had been set up in different localities. Thus cotton, pulses and jute which formed the mixed crop schedule with oilseeds and spices are now dispersed over special regions so that even those localities which formerly grew their own cotton

are now buying their cotton requirements in the open 'bazar' and growing commercial crops like oil-seeds and groundnuts. The invasion of groundnut into our crop schedule is something which is phenomenal, if not catastrophic. This mischievous nut which has played havoc with the older crop schedules dominated by essential food crops like pulses and spices, is hardly indigenous and its cultivation in our country on any appreciable scale hardly goes beyond 1840. It first monopolised 112,000 acres in the country with 70,000 acres in Bombay and 34,000 acres in Madras and slowly spread itself over the country so that by about 1933-34 it had swallowed over 8 million acres of our land resources, which could have otherwise been devoted to the cultivation of cereals and pulses.

During normal years, a good portion of the nut is exported, the percentage of exports to total production being about 50 per cent in Madras and 20 per cent in the Bombay province, France taking a lion's share of the exports of groundnuts, closely followed by Netherlands and Germany.

This trend in the distribution of agricultural products under the aegis of "regional specialisation" of crops has, with the development of transport, brought about a greater degree of inter-regional interdependence for food-crops which would needlessly complicate food-administration problems during periods of crop failure either through changes in the monsoon or through floods and agricultural calamities. Nor will such

specialisation help stability of agricultural operations, as the price of commercial crops intended specially for export is liable to violent fluctuations which are caused by harvest conditions in the other parts of the world.

### **Targets for Planning**

Any adequate solution of our food problem can only come through a proper recognition of the urgency of regionalising food production to meet the dietary requirements of the regional populations, and not by the setting up of regions of specialised production of foodgrains and edible oils and vegetables; and by rearranging the crop schedules of each region to render it as self sufficient as possible so far as the food requirements of the regional populations are concerned. A continental solution of food problem can only arrive through regional balancing of food resources; and not by a centralised administration of food requirement of the population or by centralised methods of control either of food prices or food production. Such an economic administration alone can effectively balance the food requirements of the regional populations through careful planning, of regional crop schedules and of the increased production of the other food articles like milk, vegetables, edible oils, and, where possible, eggs and fish and fruits to maintain a well balanced diet consistent with regional nutritional requirements. Such a programme of reorganisation of agricultural produc-

tion with a view to ensure adequate and well-balanced diet for regional population will not only mean complete overhaul of existing crop schedules but also the harnessing of new land resources and irrigational facilities without which no stepping up of agricultural production can be successfully implemented.

### Food Targets

With regard to food production, our targets of production will indeed look stupendous when we attempt to fix them. Taking a 'Food plate' as the basis of calculation, we may assume a 'Food plate' to consist of the following articles of food:

Cereals (wheat, rice, jowar, bajra)	16	ozs
Pulses	4	"
Sugar (or jaggery or gud)	2	"
Vegetables	6	"
Fruits	2	"
Fats and oils	2	"
Milk	8	"
Eggs or meat or fish	4	"

Our targets must be fixed for 500 million people in the next ten years, without which we cannot build up sufficient food reserves for the new population that is annually added to the existing volume of population in the country and for those periods when the monsoon or the crops

might fail:. On this basis, our production targets will have to be as under :

<i>Articles</i>	<i>Volume</i>
Cereals	80 million tons per year
Pulses	20 million tons per year
Sugar (or jaggery)	10 million tons per year
Vegetables	30 million tons per year
Fruits	10 million tons per year
Fats and Ghee & oils	10 million tons per year
Milk	40 million tons per year
Eggs or fish	20 million tons per year

When distributed according to different provinces the targets of food production will be as under :

# FOOD PRODUCTION TARGETS BY 1961

(In thousands of tons)

## POPULATION AND AGRICULTURE

Province	Popu- lation	Cereals	Pulses	Sugar	Vege- tables	Fruits	Fats and Ghee	Milk	Eggs and Fish.
	Millions								
Bengal	50	8,000	2,000	1,000	3,000	1,000	1,000	4,000	2,000
Bihar	40	7,000	1,750	1,000	2,500	1,000	1,000	3,500	1,750
Orissa	10	2,000	500	500	750	500	500	1,000	500
Bombay	25	4,000	1,000	1,000	2,000	1,000	1,000	2,000	1,000
Central Provinces	18	2,500	500	250	1,000	500	500	1,500	500
Madras	55	8,500	2,250	1,250	3,500	1,500	1,250	4,500	2,500
Punjab	18	2,500	500	200	1,000	500	500	1,500	500
U. P.	65	11,000	3,000	1,750	4,500	1,750	1,750	6,000	2,750
States and Agencies	100	16,000	4,000	2,000	6,000	2,000	2,000	8,000	4,000
Food Reserves	..	21,000	5,500	1,250	7,000	750	1,000	9,500	5,000

In fixing these food production targets, allowance has been made not only for the normal growth of population during the period of reconstruction, but also for certain marginal adjustments in composition of regional dietary on nutritional lines, with special reference to regional requirements. Allowance has also been made for the balancing of population consequent on the creation of the two Dominions in August 1947, while ample provision has been made not only for the building up of an adequate food reserve, but also for starting of food industries and for the storing of food in the regions concerned.

### Cereals

These food production targets together with an intensive drive for food production of high-grade cereals like rice and wheat in place of low grade foodgrains like jowar, bajra maize along with an increase in the productivity of land resources would fundamentally change not only the existing crop schedules, but also the areas devoted to each crop in every part of the country. Of the important low grade foodgrains, in 1940-41, 6.32 million acres were devoted to barley, 21.24 million acres to jowar (land resources almost equal to those set aside for wheat) 14.08 million acres to bajra, 3.50 millions acres to Ragi and 5.72 million acres to maize in the whole of the subcontinent. This allocation of land resources not only shows what an important place jowar and bajra have come to occupy in the national diet

of India, particularly with the poorer strata of the population, but also betrays the grave economic trend that over the larger part of the country, rice and wheat are fast becoming commercial crops while jowar and bajra are slowly elevated to the position of staple food crops. Without liquidation of this menacing trend in the swing of food production in the country, higher living standards with balanced diet for the majority of population would be like chasing a mere economic mirage in an ever receding horizon of economic prosperity.

These targets of food production are not unattainable or impossible. An attack on the low productivity of our land resources must be made and the average yield of crops raised to reasonable levels with intensive farming and intensified regionalisation of food-production. To-day in rice we are content to produce roughly one third of what China is producing and half of the average world yield of rice per acre. In wheat, which has spread in more recently developed canal zones of the Punjab and the fertile plains of the Ganges regions of the United Provinces, we are able to gather a slightly better harvest though our yield is roughly 30 to 40 per cent lower than the world yield of wheat per acre and definitely less than what the Japanese farmers are able to garner from their fields.

With the greater spread of irrigation facilities and the propagation of scientific agriculture, even making due allowance for regional differences in the fertility of soil and allowing for the long-range



considerations of maintaining that fertility from falling, we can safely double the yield of rice and wheat on our land resources. According to production statistics available at present we are growing 35 million tons of high grade cereals like rice and wheat on nearly 100 million acres giving us an average yield of 746 lbs of foodgrains per acre. If we are to raise the yield of foodgrains to even 1120 lbs per acre, we shall be able to reach the target of 80 million tons of foodgrains on 160 million acres of land resources and release at least 10 million acres of land resources from the average that is today devoted to foodgrains for the cultivation of other commercial crops to build up our export trade to reach higher living standards for the people.

These targets are not visionary. China has been able to produce 2433 lbs of rice per acre and Japan has been producing 1350 lbs of wheat per acre. We would thus be able to cover all the F. P. Units of cereals with only 160 million acres, while today we are devoting 70 million acres for rice alone 25 million acres for wheat, 20 million acres for jowar, 7 million acres for barley 3.5 million acres for ragi and 14 million acres for bajra.

These data clearly demonstrate the stupendous waste of land resources in the country to raise a quantity of food, which does not even guarantee two square meals for the population of the country and the hollowness of the bogey of over-population that is raised to frighten economic recons-

tructionists with the grim countenance of the Malthusian Devil over our continent ! What is obviously lacking in the proper balancing between population and food production is not the absence of land resources to create food for the population but the necessary economic evolution to utilise the vast land resources to produce food for the people, as the foregoing data amply demonstrate.

### Pulses

As regards pulses, we were devoting an area of roughly 40 million acres for the crops in 1940-41 registering a sharp decline in the area from 1930-31 when we were devoting 43 million acres, with 1933-34 being the peak year with 47·1 million acres. Our production target is 20 millions tons of all kinds of pulses, and, with better methods of production and more careful study of regional land resources and planning, we shall be able to produce our requirements in pulses with about 30 million acres of our land resources. An intensive regional survey would reveal the directions along which planning of production of pulses is to proceed. Today the main pulse growing zones of the country consist of Madras, the Central Provinces, Bihar, the United Provinces, Bombay with Bengal and Punjab bringing up the rear. According to the F. P. units, Bengal is evidently a deficit zone with regard to its pulse requirements, the surplus regions being the United Provinces, Madras, the Central Provinces and Bihar. Greater commercialisation of

food production has obviously been responsible for this distribution of pulses production in the country and only intensive research can reveal whether it would be better to maintain these zones as special "zones" of production of pulses with interzonal trade in pulses or whether the other deficient areas of the sub-continent can grow these pulses and release the vast land resources of the country for higher nutrition agriculture without land reclamation schemes on a vast scale.

### Sugar

With reference to sugar, our production target of 10 million tons can be reached with very little extra effort since our sugar industry is yet young and the cultivation of sugar-cane is more satisfactory than the cultivation of other primary products. Today our total production of sugar-cane yielding raw sugar and the total production of sugar in the sugar factories of the country including Khandasari, palmyra and other varieties is about 7.5 million acres for the cultivation of sugarcane. Naturally for several years before the outbreak of the war and the heavy influx of fighting forces and the spiral of rising prices, the sugar industry was threatened with a crisis of over-production and since price formations in gur and sugar are inter-connected, the sugar industry was caught in the tentacles of a vicious chain-index of falling profits. In the context of the foregoing production statistics today with regard to sugar, the target of 10 million tons is well within the

capacity of the existing industrial structure and it would not be too much to hope that with slight reorganisation of the industry, we shall be able to build up adequate export surpluses in sugar.

### Fruits and Vegetables

With regard to fruits and vegetables, the combined target of 40 million tons can only be reached by severe planning and regulation of production over the entire subcontinent. Production statistics regarding fruits and vegetables are unsatisfactory at present, and with regard to fruits, they happen to be seasonal crops, subject to erratic fluctuations in output depending upon meteorological conditions from month to month and no accurate estimate of fruit production can be successfully reached. Vegetables are grown haphazard except in regions adjoining big urban centres where vegetables command a regular market; and except potatoes, sweet potatoes and other roots and onions, which are comparatively durable and can be spread over a wider marketing range, the vegetable requirements of the majority of population are met from small patches of kitchen gardens which have today become fashionable in the newly developed urban areas up-country, where pressure on living space is not so heavy as in old urban centres like Bombay, Calcutta and Madras.

Suburban development has encouraged individual gardening to a degree that makes more

urban populations self-sufficient with regard to their vegetable requirements. With regard to fruits, attempts have been made to develop orchards in some places, like the mango groves in the Deccan plateau on the west-coast zone, orange groves in the Central Provinces and apple-groves scattered all over India, and production of fruits is largely for purposes of consumption in the regions concerned in the absence of a well knit fruit canning industry. We have about 4 million acres under fruits and vegetables today and unless we encourage plantation of orchards and develop horticulture of the country with better irrigation facilities and canning and refrigeration amenities, greater spread of fruit and vegetable cultivation cannot be properly balanced and will continue to be haphazard and inefficient. Special and intensive research into the methods of preservation and commercialisation of tropical fruits which are too numerous to catalogue in the course of the present work would reveal the possibilities of developing fruit and vegetable cultivation to export levels and it is needless to state that extension of fruit culture would involve not only reclamation of additional land but also conversion of a portion of land-resources which are existing today into garden lands with intensive development of irrigation facilities in the form of tanks and tube-wells where facilities for canal irrigation do not exist. In this regard, the vast horticultural resources of the forest zones of the country particularly with reference to wild fruits cannot be ignored, nor should the possibilities of terracing of hills for development of fruit cultivation in the

highland zones of the country, be overlooked. The development of regional as well as interzonal and external markets with greater spread of refrigeration and canning facilities is of the utmost importance in the balancing of fruit and vegetable cultivation in the country, since fruits and vegetables are seasonal and regional over the greater part of the subcontinent.

### Oils and Fats

With regard to oils, ghee and fats the first two have to be studied with reference to the edible oil seeds production in India and the last two with reference to problems of development of dairying in the country. The target for milk is 40 million tons and for vegetable oils 10 million tons. The production of groundnut is about 4 million tons at present, that of rape and mustard 1 million tons and that of seasmum (til) is about half a million ton, while separate statistics for the production of cocoanuts reveals that the country is yielding about 1 million tons of cocoanut oil on 1.5 million acres of cocoanut plantation with 1 ton of yield of nuts per acre. As cocoanut oil with groundnut and til oils and mustard oils forms an important part of the national diet, attempts must be made to conserve it in the country. Cocoanut is the special crop of specific regions of the country like Kathiawar, Kanara and Ratnagiri districts of Bombay, the Godavary Kanara and Malabar regions of Bombay Travancore and Cochin tracts of the west coast

and must constitute the special product of these regions of the country. The seasamum is widely distributed all over the country except in the United Provinces, rape and mustered are well distributed over the entire country with special concentration of the seed in the United Provinces, Bengal and Bihar. The total production of these oils can be placed at quarter million ton per annum. The production of groundnut oils is about 1.5 million tons per annum. All the vegetable oil produced in the country can be said to yield about 4.5 million tons of oil, leaving margin of 5.5 million tons to be covered by ghee and fats. This naturally would render necessary greater spread of dairying with improvement in milk yielding bloc of the cattle wealth of the country, spread of edible oil seeds over the land resources of the subcontinent, and the development of cocoanut plantations in the coastal regions with greater dispersion of oil-milling industry into the oil-zones of the country.

### Milk

With regard to the milk target, of 40 million tons per annum, the development of milk-bearing breeds and proper fodder for the cattle particularly oil cakes and the butter content of milk can be increased along with reduction in the number of cowheads that would be required to produce the target quantity of milk. We have accumulated heavy cattle population and possess excellent milk-bearing breeds among cows as well as buffalos. Our

cattle population is said to be sixty per cent of the human population. In the military Dairy Farms of North India, the milch-cattle were yielding from 5.5 lbs to 17 lbs per diem and even if we put the average milk production under an intensive programme of cattle conservation at 15 lbs per day, about 20 million milch-cattle would be able to carry us to our targets in milk production. It should not be difficult to reach the target in milk production when we have a cattle population of over 200 millions.

### Fish and Meat

India has essentially been a country of vegetarian diet by poverty and necessity. Non-vegetarian food is forbidden by religious injunction only to about 17.5 millions of Brahmins, 7 million Banias, Chetties and Vaisyas and 7.5 million Jains out of the entire population, and the frequency with which the rest of the population supplement their food with fish, meat and eggs is determined by the availability of non-vegetarian diet, over the greater part of the country and the price of these articles of diet in the concerned area in relation to the income-standards of the population. In the coastal zones of the subcontinent, fish is a very common article of daily food, since fishing is common among the lower strata of population and becomes, like agriculture in the greater part of the subcontinent, more a mode of living than a regular 'profession,' except in tracts where fishing is developed for the exploi-



tation of wider markets. With the country craft that fishermen possess, they are hardly able to fish beyond 7 fathoms in the sea, and fish-curing is hardly developed except along the Madras coast; West coastal zone, has fishing to some extent: There is some degree of fresh water and marine fishing in Bengal, while the systematic exploitation of marine fishing in Bombay yielded in 1942-43 a total of 3,000,000 lbs of fish. Travancore has made enormous strides in the development of fishing industry by opening a separate department in the University of Travancore for research in fishery and connected marine industries. Further growth of fishing industry can only come with the development of refrigeration facilities and the growth of a steady urban market which today is confined to big urban centres like Bombay, Calcutta and Madras and the populations of the coastal zones. Naturally, fish is an article of luxury in the upcountry areas of the country, except in river zones, where fishing is for subsistence only, with an ever-shifting local market for fresh water fish. There is no fish canning industry or liver extract and fish oil industry or any wide scale in the country. Before the outbreak of war, our export of salted fish had fallen from 221, 959 cwts in 1929-30 to 119, 592 cwts in 1938-39 showing a fall of over 45 per cent in the quantity of exports as well as in the value of exports. With excellent regional varieties of fish, like the seer, the pomfret, Lew fish, whiting, Thread-fins, Sardines and Mackeret, in Madras, the Hilsa, the Mohu, the Katla, and the Mrigal in Bengal, the Karel, Palu, Tambusa in Bombay,

the carp, gold fish and the Darvicidal fish in the Punjab, oysters in the Baroda State and the Shark in Travancore State, it is a pity that no extensive fishing industry should have developed in the country and the vast fishing resources should yet be untapped. Fishing would provide, with development of refrigeration and canning facilities, not only a source of substantial improvement in the daily diet of the population of the country but also a flourishing source of building up the export trade of the country. As it is today the export trade in fish is less in quantity than our export trade in onions which had increased from 868, 260 cwts in 1929-30 to 1,445, 319 cwts in 1938-39.

Similar is the saga of poultry and meet industry in our country. Poultry keeping in India is akin to kitchen gardening and except in the regions immediately adjoining the big urban centres of the country the two avocations have remained practically undeveloped in the larger portion of the subcontinent. Poultry farming is rarely come across on the Indian rural landscape and poultry and eggs are reared in the village-homes for domestic consumption and additions to the poultry are made either by local purchase or by purchasing them from wandering dealers in poultry. Subsistence economy which has cast its grim shadow over the formation of an adequate consumption 'market' in the greater portion of the country is responsible for the haphazard and heavy decentralisation of poultry and meat industry. There is a very small degree of market in the periodical fairs and bazaars that are the special

features of our rural economy and even there, the market is 'erratic' and unpredictable. Naturally any thing like an organised market for poultry or meat is hardly found except in the bigger urban centres of the country and slaughtering of animals or poultry in the great rural areas of the country is done more as a religious celebration for the propitiation of certain gods and goddeesses, when partaking of non-vegetarian diet takes the shape of communal rejoicings attended with great pomp and pagantry.

In the context of the above observations, it should be plain that reaching our target of 20 million tons per annum is not a difficult endeavour in view of the vast undeveloped resources in regard to fish, meat, eggs and poultry and an adequate exploitation of these food resources can only come with deliberate planning of fishing, poultry and meat industries to supplement the food requirements of regional populations and to build up export trade in these articles through the wider spread of refrigeration and canning facilities in the specific regions which are specially suited for the development of the connected industries like leather and hide industries, the preparation of liver-oils and of fats and horn specialities.

### Significance of Targets

The setting up of these targets does not mean or imply central or provincial administration of economic resources; more efficient and

comprehensive balance in matters of even food requirements can only be properly implemented by regional administration of resources with a view to increasing the food resources of each region to sustain the existing population and to make ample food provisions for the population we might anticipate to accumulate in the next few years and also build up some extent of export-surpluses to maintain foreign trade relations between our country and the other nations of the world to reach higher living standards for the population.

Next to food production, the organisation of 'commercial' crops presents severe problems of adjustment and administration. The so-called oil-seeds crops have today spread over 17 million acres of our land resources, and with the attainment of our production targets in food crops, the portion of land resources that can be allotted to commercial crops will decline, unless intensive programmes for land-reclamation are launched to keep up production of commercial crops. In addition to oil-seeds, a good portion of which would come under 'food products', all oilseeds with the exception of linseeds and castor, falling under this group, regular commercial crops have spread over about 20 million acres with 16 million acres for cotton, 3 million acres for jute and 1 million acres for other crops. With the exception of groundnuts, our foreign trade in other oil seeds had registered a sharp decline from 1929-30 to 1938-39, the year of the outbreak of the recent war. Similarly we were exporting less cotton in

1938-39 than in 1929-30, our export of cotton waste showing alone improvement while our trade in cotton piece goods had remained stationary. Similarly our export of jute had fallen in the period under survey, while the export of jute manufactures, had remained stagnant in the period. The only commercial primary product that had shown slight improvement in the period was tobacco which had risen from 25 million lbs in 1929-30 to 60 million lbs in 1938-39.

These trends in our foreign trade prove that we cannot pretend to maintain our export levels in these articles without drastic reconstruction of our agricultural cost structures in regard to commercial crops and we can well afford to administer our land resources devoted to these crops to maintain an internal target of consumption rather than attempt to build up export targets without serious dislocation to our national economic evolution, at least for some time to come.

### **Clothing Problems**

Our agricultural production is bound to be fundamentally affected by the clothing requirements of the population. Our targets in cloth production cannot be fixed without reference to regional differences in dress determined by regional climatic conditions and social and cultural institutions. Thus it may be asserted that dress in the peninsular zones of the subcontinent is less complicated than dress in the

Northern regions of the country where climatic variations are sharply pronounced and necessitate seasonal adjustments in dress. Even in the peninsular zone, the cooler regions of the Mysore plateau and the southern reaches of the Bombay Province necessitate more complicated dress formations than the regions of the Malabar coast and Southern Madras tracts, while as we climb up the East coast to the Andhra territory, dress again becomes more varied and expensive. Woollen garments are hardly needed in the Peninsular zone, except during winter seasons in the Deccan Highlands and that too in the Mysore plateau and the Blue Mountain zone; while woollen garments are necessary in the Northern plains and highlands of Kashmir including northern reaches of the United Provinces, Bihar, Bengal and the Eastern Punjab.

### Cotton Textiles

Necessarily the national dress of the subcontinent can be said to consist mainly of cotton, and this has a very important bearing on cotton production on the land resources of the country. Today the cloth that we are importing, together with the cotton fabrics that we manufacture in the organised textile industry and the handloom industries, allow only 15 yards per head for the population of the country, out of a total production of raw cotton of 7 million bales of 400 lbs each; the cotton mills of the country consumed about 3 million bales, the rest of the total volume

of production being consumed by the handloom industry and the remaining portion being exported in the form of raw cotton and cotton manufactures, our exports being in the neighbourhood of less than 3 million bales. This leaves 1 million bales of raw cotton as the quantity of cotton consumed by the handloom industry which is very widely spread over the entire subcontinent. Our total imports of cotton, raw as well as manufactured, is in the neighbourhood of 1 million bales, so that 5.5 million bales of cotton are today ensuring 15 yards per head of population per annum. If we are to increase the cloth production targets to 30 yards per head for 500 million population, we shall have to provide for a production of 15 billion yards of cloth and the consumption of raw cotton in the textile industry will have to be about 6 million bales of raw cotton, and that would mean increase of our textile industry to consume 3 million bales of new cotton per annum or doubling the cloth production in the textile mill industry leaving the handloom industry intact. This target of cloth production would not necessitate any additional allocation of land resources for cotton-cultivation, but would release a portion of the land that is today devoted to cotton to the cultivation of other crops, under better farming methods in the cotton regions of the country. These targets could of course disturb the composition of our export-trade, but as the bulk of cotton exports from India was being consumed by Japan which was our most powerful competitor in the textile markets of country, any reconstruction of foreign trade in cotton would

not deeply affect the economic structure of country and we can safely plan to reach our targets of cloth production and reduce imports of long-staple cotton from Egypt and America by extending its cultivation to the trap soils of the Deccan as we had done in the canal colonies of the Punjab in recent years.

Besides the quantity of cotton that we require for our textile targets, cotton is also required for the non-textile requirements of the population of the country like bedding-pads, surgical needs and cotton waste for industrial and engineering requirements, to mention a few of the non-textile needs of the population and we can put these needs as not less than 75 per cent of the total quantity of cloth needed for clothing targets, but often it has to be more with greater industrialisation of the country and as it will be no less than double the quantity of cotton for textile purposes and our targets will have to be raised to 15 million bales of cotton, in view of the fact that over 300 million people of the country do not possess today any kind of bedding linen or mattresses worth-speaking, nor do they, today, use cotton for industrial purposes to the extent they would use with intensive programmes for heavy decentralisation of the industrial system and the development of automobile transport under reconstruction of the continental transport-system.

In our calculation of clothing targets, finer varieties of cloth have been taken and coarser textiles in cotton will undoubtedly increase the quantity



of cotton that would be required to reach our clothing target of 15 billion yards covering the basic clothing needs of the country. Naturally the targets for cotton production cannot be fixed with the same accuracy which we could attain with regard to food requirements of the population and is a moving target which shifts with regional variations in matters of climatic conditions and tastes. A rising standard of living will exert terrific pull on clothing targets and there will always exist a shifting margin for imported cloth. Further the phenomenal transformation in the textile industries of the world and the new fabrics that are created would undoubtedly exert terrific pressure on any plan for the standardisation of dress over the greater portion of the subcontinent.

### Other Textiles

These observations are made to emphasise that planning of clothing targets would create several regional and national problems of rehabilitation of regional and national dress and intricate the problem of administration of cotton production to adjust itself to changes in regional fashions and, in this regard, we cannot ignore sericulture and the possibilities of marginal adjustment of clothing targets in cotton with silk-textiles which takes us to the problem of agricultural production connected with the development of silk industry and the production of raw silk with expansion of mulberry cultivation. Nor can we ignore the

impact of development of woollen industry and the production of raw wool and the problems connected with sheep-rearing and the allocation of land-resources for extensive pastures for sheep-farming in specific regions of the country.

Even if we are to ignore the possibilities of textile industries unconnected with agriculture, the development of cotton, silk and woollen industries to clothe 500 million people who form our targets in planning for reasonable plenty, would disturb agriculture production and planning of land utilisation scheme from three directions : (a) the allocation of land resources to step up production of cotton to the minimum target of 15 million bales as compared with 7 million bales of today (b) the allocation of land resources to mulberry cultivation to develop silk production in the country to meet the clothing requirements of at least 100 million people who will need at least 3000 million yards of cloth (c) the development of pastures for sheeprearing to carry production of wool to the target of 3000 million yards. In this connection, we cannot ignore that the wollen industry cannot be decentralised to the same extent as the cotton and silk industry and even the silk industry cannot yield to a process of decentralisation like the cotton industry and this peculiar feature of these two industries will create problems of localisation and heavy regionalisation of these industries and complicate the problems of land administration, of forest policies and of reconstruction of inter-regional trade with delicate balancing of the flow of special and essential

goods between regions which are brought into trade relations with each other.

These problems will be further complicated when we study the organisation of silk and woollen production today. Today woollen industries are heavily localised in Kashmir, the Punjab, the United Provinces and the northern regions of the Mysore State and we have developed a good export trade in woollen carpets with the United Kingdom and the U.S. A.; so that even in years of Great Depression we went on exporting rising quantities of woollen carpets which went up from 1.6 million lbs in 1913-14 to 8.4 million lbs in 1933-34 and 10 million lbs in 1934-35. Raw wool exports were 55.4 million lbs in 1938-39. There are vast possibilities of developing external markets for woollen goods abroad and this would undoubtedly affect our foreign trade relations and depend upon the development of sheep rearing in the other parts of the country and the availability of land resources for the expansion of pastures, particularly in the cooler regions of the country.

### Silk

Similarly balancing of silk industry with rising production of silk will create severe problems of localisation and specialisation in view of the fact that about three-fifths of the total output of silk today comes from the Mysore State and the

adjoining Coimbatore region of the Madras province. Other silk producing areas of the country are parts of Bengal, Assam and submontane regions of the Punjab, Kashmir and Jammu States, selected areas in Bihar, Central Provinces and the Mirzapur district of the United Provinces. Mulberry cultivation had spread in the silk producing zones over 70 thousands acres and 700 thousand workers were engaged in sericulture and allied occupations. Our exports in raw silk have remained practically stationary from the last quarter of the 19th century with a slight incline downwards, while exports of silk manufactures have declined from 823 thousand yards in 1918-19, the year of peak exports to about 393 thousand yards in 1935-36, while we imported 2.2 million lbs of raw silk, 1.1 million lbs of silk yarn, noils and wasps and 16.8 million yards of silk piecegoods and 5.8 million yards of silk goods mixed with other materials in 1938-39 together with 17.2 million yards of artificial silk yarn, 28.5 million yards of artificial silk piecegoods and 5 million yards of mixed artificial silk goods.

With greater production targets in silk, production of raw silk and silk-weaving are bound to spread particularly in those areas where the industry happens to be localised today, and disturb balance in the allocation of regional land resources in the regions concerned. The greater possibilities of expansion of silk will undoubtedly depend upon the demand for silk products which is today confined to the upper strata of the social

structure. We are today importing heavy quantities of silk-goods as compared with internal production, and artificial silk is becoming more and more popular. We certainly do not know the direction of the swing of silk-markets with improvement of living standards of the people and with the appearance of effective substitutes for natural silk. And the industrial uses of silk are yet an uncertain factor in the fixing of production targets.

In the arduous days of economic reconstruction ahead we must aim at the reconstruction of foreign trade both in content and in the direction of trade and with heavy imports of capital goods and other essential consumption goods, we cannot afford to maintain these heavy imports of silk goods and must attempt to build up silk industry to the levels where our imports of silk goods can be reduced if not effectively eliminated. The greatest threat to the maintenance of production targets in silk would be offered by rayon fabrics and the extent of imports that would be dumped on us; and naturally, our land administration with regard to mulberry cultivation to breed cocoons for silk industry will have to be kept fluid, nor can we place too much reliance on silk industry to keep up balance of the occupational structure of the country. Upto 1938-39, the total average number of workers in the silk factories including silk filatures hardly exceeded 5000 scattered in 98 factories, though there was a sharp increase in the number of factories from 68 in 1937 to 98 in 1938.

## Agriculture and Irrigation

To reach our production targets in agriculture, irrigation facilities are of utmost importance and stabilisation of agricultural production, so far as yield per acre and total volume of agricultural produce is concerned, cannot be implemented without rescuing a large portion of our land resources from the vagaries of the monsoon. Today canal irrigation has spread over a fraction of the total land resources of the country. In Madras, for instance, for a total acreage of 79 million acres only 2.5 million acres were under irrigation by canals spread over 3.9 thousand miles and with major irrigational projects like Cauvery-Mettur project, the Godavari, the Kistna and the Cauvery delta systems and Coleroon, Pennar and Periyar river projects, irrigation would not go beyond the limit specified. In Bombay for 48 million acres only 7 thousand acres were under systematic canal irrigation. In Bengal, for 50 million acres only 38 thousand acres were under irrigation. In the United Provinces for 18 million acres, 4.8 million acres were covered by canal irrigation system with Ganges-Jumna and Sarada canal systems. In Bihar for 44.3 million acres only 594 thousand acres were irrigated in 1938-39, while the other provinces of the Indian Dominion were at the mercy of the monsoon, though the percentage return on total capital outlay on major irrigation works was never below 4 per cent from 1929-30 to 1938-39.

These few facts demonstrate the magnitude

of land resources that are to be reclaimed from the monsoon through extension of irrigation either through tanks or wells or through giant river-zone development projects and even through overhaul of the existing irrigation project to extend the milcage of canals. The above data relate to the so-called 'productive' work which covered an area of 2·8 million acres, the maximum acreage under this head being in the Punjab, followed by the United Provinces and Orissa, Central Provinces and Bombay. Besides these major irrigational works, over some parts of the country land is irrigated by wells and tanks. Cattle power is used to lift water from wells. Wells are found in the United Provinces, Madras and Bombay generally, though well irrigation is the costliest form of irrigation and only high grade crops can be grown on the land irrigated by wells. Similarly monsoon tanks are constructed in the peninsular regions for irrigational purposes and tanks are responsible for the irrigation of 8 million acres in the country.

These few data regarding existing irrigational facilities definitely prove that irrigation must become an integral part of greater land reclamation projects throughout the country without which production targets in agriculture cannot be reached, much less maintained. Little organised attempt on any appreciable scale has so far been made to harness the monsoon for increasing the irrigated portion of the vast land resources of the country; nor has any planned effort been put forth for the development of the river-zones and

for the setting up of agricultural colonies in the river areas. It is of course true that barring perennial rivers like Ganges, the Jumna, the Kistna, the Godaveri, the Cauvery, and the Narbada, the majority of rivers are seasonal, and while they become mighty streams during rainy months, that are little more than a string of stagnant pools during the dry months of the year. These fitful streams offer great opportunity for the construction of river projects in order to regulate the flow of water throughout the year for irrigation as well as for power and navigation development purposes.

In this connection, we cannot ignore the fact that some rivers, while flowing through the plains, often change their courses and present problems in efficient river-development engineering. Nor can we ignore the vast irrigational potentialities of some of the tributaries to the great rivers of the country, which offer great possibilities for the development of prosperous river-colonies in the tracts through which they flow.

Attention in the past had been paid by the Government for the development of the two provinces of the Punjab and the Sindh, while little evidence is available of any interest for the development of irrigation until we come to the Cauvery zone in Mettur on any appreciable scale. In the peninsular regions, inundation tanks have been constructed in several river zones; particularly in the Madras presidency and any rise in



the water levels of the river during the rainy seasons is diverted into tanks and water is doled out to the agriculturists through canals mapped out from the tanks. Though we have the Kistna delta irrigation project, it is a great pity that the great river Kistna has not been subjected to any major irrigational or multipurpose development scheme at any point during her long courses through some of the driest tracts of the peninsula. Similarly, the Cauvery is dammed out in two places in the entire course of the river, one in the north in the native State of Mysore giving Krishna Rajasagar project which has evolved itself into a purely single purpose project and the Mettur project where the river is better utilised for the generation of hydro-electric power, though further down its course in the Mysore State the river's drop at Sivasamudram has been utilised for the generation of hydro-electric power which has been responsible for the industrial development of the southern half the state.

The river wealth of the country has hardly yet been tapped for the development of the material prosperity of the people, in spite of the fact that a great part of the early civilisation had centred round the great rivers of the country like the Ganges, the Indus, the Narbada, the Kistna and the Godavari. We have not yet heard of any development plans on the Narbada and Godavari and there are a few projected schemes of river-development in recent years on the Tungabhadra river in the Deccan. The development of the Narbada can galvanise the material prosperity of

the Central Provinces, even as the Godavari can be harnessed to develop prosperous river zone communities in the Bombay province and the Kistna to conserve the vast agricultural resources of southern Hyderabad and some of the driest zones of the Madras province. There are, indeed, vast zones particularly in the submontane and montane tracts of the north and west, in the Himalayan and the western Ghats regions of the country, where the monsoon streams can be harnessed by construction of vast reservoirs and the waters utilised for irrigational as well as power requirements of the neighbouring communities. The Tata power scheme in Lonavala and the Andhra valley and the Pallivasal System with a diversion dam and pressure tunnel, the Pykara power scheme in the Blue Mountains area in Madras, the Papanasam Hydro-electric project, and the Jhelum power scheme in Kashmir all demonstrate the immense potentialities that await multipurpose projects not only for the development of industries but also for the planned utilisation of the agricultural resources of each zone.

The locale of river valley and riverzone development projects cannot be determined without a comprehensive survey of the river wealth of the country and the terrain through which the rivers course, and in this connection, it cannot be too well emphasised that colossal engineering skill is required not only to plan out regional river projects but also to conserve the water-resources of the subcontinent for irrigational as well as for developmental purposes.

In this sense, irrigation schemes must be regionalised and carefully planned in the context of the terrain in which they are to be located and with a view to full utilisation of the power and irrigational resources of major projects. This would imply careful study of the geographical factors of each region, the flow and consistency of rivers, the abundance or paucity of subterranean water resources and the facilities of industrialisation of the regions in order to tap water power resources and the lay-out of raw material. Irrigation must be auxiliary to the reaching of regional targets in food production and raising of commercial crops and to the extent of land to be reclaimed in order to reach regional targets of agricultural production. There are regions where tube well and bore well irrigation will have to be developed even as there are regions where pump irrigation from rivers and wells would have to be provided for to escape abnormal capital outlays on the layout of major river-valley development projects. There are regions where tanks will have to be constructed and canals mapped out to ensure steady supply of water to carry crops to maturity. Nor can we ignore the fact that production targets cannot be reached without complete overhaul of crop-schedules. Crop schedules will have to be classified under two heads (a) essential or life crops and raw materials like sugarcane and cotton or beetroot to maintain the regional industrial structure necessary to keep up balance of occupations and (b) special crops which are the special products of the regions like mulberry, other fibres like jute,

tobacco, tea and coffee, medicinal herbs and plants, industrial oil seeds like linseed and castor oil, opium and special spices—to give a few of the special crops which would not yield to a process of dispersion over the entire country. Irrigation facilities will have to be adjusted to new crop schedules under a special spiral of crop priorities. Thus in zones of well irrigation, greater attention will have to be given to the cultivation of high grade crops and spices, vegetables, fruits and the special crops. And greater attention will have to be devoted to the cultivation of essential food crops in the newly developed river zones where the cost of irrigation projects can be balanced between agricultural and industrial schemes of regional development with a wider area of transmission of power operating costs. These are matters on which no hard and fast principles of economic administration to maintain financial balance of major river development projects can be apriori and categorically stated, in view of the eminently regional character of the problems of administration involved. Specially when we learn that hydro-electric power can be made to reach a radius of 300 miles from the point of generation, it can safely be asserted that the cost of irrigation projects where power generation is also undertaken can be diffused over a wider area of administration than when irrigation projects cannot be developed into multi purpose schemes, as in the case of tube wells and tank development programmes where the structure of capital outlay will have to be financially balanced with the value of agricultural output in the regions served by these projects.

It is this aspect of irrigation finance that makes multipurpose river development projects more economical than mere irrigational projects. It is possible to develop better balance in the occupational structure of the zones covered by multipurpose river development projects as the supply of cheap hydro-electric power will develop prosperous agricultural colonies and industrial centres which can maintain reasonably efficient economic relations with each other and preserve adequate balance in economic evolution between agricultural advance and industrial prosperity. The much publicised American experiment in the Tennessey Valley is an instance which proves the enormous economic possibilities of multipurpose river valley and river zone conservation projects. Only an intensive survey of the river valleys and river zones of the country can reveal the extent of river colonies that we can build up along the course of the major rivers of the country.

### **Forest Administration**

Closely allied with agricultural advance is the problem of integral conservation of the vast forest resources of the country, which have so long remained unexplored in view of the transport difficulties and the problems of making any programme of intensive exploitation of forest resources an economically profitable adventure. The forest resources of the country are enormous: The United Provinces heading the list with over 66 million cubic feet of timber and fuel, Bombay

following with 53·6 million cubic feet of timber and fuel. The Central Provinces contribute 42·2 million cubic feet of timber and fuel, Bengal following with 27 million cubic feet as recorded in the year 1938-39. In the area of the forest zones, Assam leads the list with 21 thousand square miles, the Central Provinces covering second with 19·4 thousand square miles, Madras following with 15·4 thousand square miles with Bombay having 10·7 thousand square miles. In regard to minor forest produce, Bombay was able to haul 27·9 lakhs of rupees, the United Provinces coming next with Rs. 22·3 lakhs and of forest produce with the widest area of forest for the entire country. Efficient forest administration depends partly on the availability of labour resources, in the form of population density, partly on the availability of transport facilities to reach the depths of forests and partly on the volume and value of the forest resources that are available. Naturally, the value of forest produce has been higher in the heavily populated zones of Bengal, the United Provinces, Bombay and the Central Provinces than in Assam where the density of population was 186 in 1941 as compared with 391 for Madras, 272 for Bombay, 779 for Bengal and 518 for the United Provinces, the density of population in Assam being far below the average for the entire country which stood at 246 in the year 1941.

Greater conservation of the vast forest wealth of the country would imply not only wider and deeper penetration of forest zones by light and

adequate transport facilities, but also the development of forest zones by repopulation through rehabilitation of efficient forest industries like furniture-making, paper manufacture with bamboos and sabai grass, bee-keeping, gum and lac industries, horticultural products and canning industries, rope making industries, basket and cane industries. Such development of forest wealth of the country can only be properly implemented by a well conceived plan, not only for the spread of pastures for grazing cattle as well as for sheep farming purposes, but also by a concerted policy of afforestation so as to increase the forest resources without disturbing the balance in the economic administration of the land resources of the country. No adequate development of forest wealth can be properly balanced without settling of small industrial communities on the fringes of the forest zones to develop industries connected with forest produce, thus obviating the problem of movement of forest produce over long distance in the country for purpose of preparation of the raw material into finished goods. Similarly there are vast areas where better kind of fodder for the cattle can be grown, prepared and transported to meet the need of the cattle that will have to be maintained to reach our targets in the production of milk, butter and ghee.

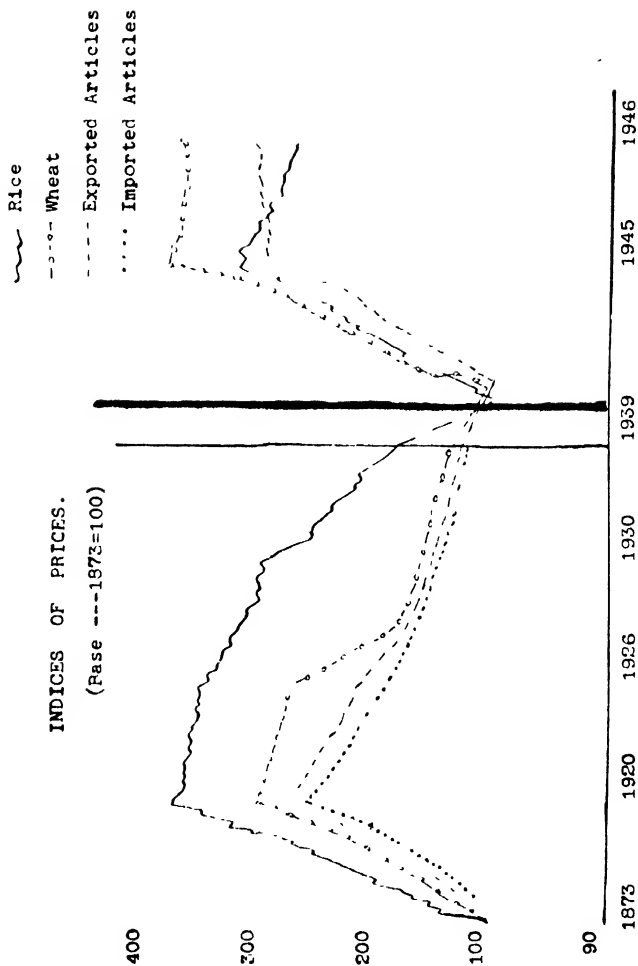
It is needless to urge, at this stage, the important part which forest would play in the vast building projects that would be launched in various part of the country, and to provide housing facilities for 500 million people, transport





# INDICES OF PRICES.

(Base ---1873=100)



needs that would go on expanding and the greater demand for furniture that would manifest itself as living standards rise. We need wood to build houses, to lay out railways and tramways, to span rivers and streams, to have greater comforts in furniture like rope woven cots and chairs and beddings and forests will have to provide the wood that we need, the rosin, gum and rope that we require, beside the bamboo and straw that are necessary for the manufacture of paper and stationery for the people of the country. Intensive regional research in the development of new forest industries alone can use the vast potentialities of our forest resources not only for industrial development but also for the greater conservation of indigenous herbs and medicines and for building up exports in some of the special products of forests.

### Balancing of Agriculture

Two major problems arise with regard to the balancing of agriculture in the future economic evolution of the country: (a) the problem of price management (b) the problem of balancing population with the formation of adequate agricultural employment in the economic setup of the days to come.

Before we proceed to discuss the problem of price management in the light of the problem of balancing economic evolution, it is necessary to study price formations in 1938-39 on the eve

of the outbreak of the recent world war and the value of the produce and volume production per capita of agricultural workers :

On the basis of the average prices ruling in 1938-39, we get total valuation of agricultural production as under.

<i>Article.</i>	<i>Average rate per ton</i>		<i>Total value of product in Rupees.</i>
	<i>Rs.</i>	<i>As.</i>	
Rice :	135	0	3,10,50,00,000
Wheat :	60	0	60,00,00,000
Barley :	67	8	13,50,00,000
Jowar :	60	0	24,00,00,000
Bajra :	82	8	16,50,00,000
Maize :	75	0	15,00,00,000
Gram and Pulses :	135	0	40,00,00,000
Cotton :	385	0	46,80,00,000
Jute :	121	0	81,00,00,000
Sugarcane :	165	0	49,50,00,000
Groundnuts :	104	0	23,40,00,000
Other oil seeds	110	0	12,50,00,000
Total :			692,70,00,000

Dividing the total value of farm produce by the total number of farmers in 1938-39 which can be estimated to be 112 millions, we get a per capita value of farm produce of Rs. 61-12-0 per annum. These price formations for agricultural produce are the result of subsistence economy and the peculiar distribution of occupations in our country where the majority of population are farmers and

agriculture is adjusted to the production of life crops rather than to the cultivation of commercial crops with the result that the volume of food that is available for sale on the markets of the country is only a fraction of total output. It is this fact that keeps the price of lower-grade food grains on a par with the prices ruling for wheat. The extent of market for food grains is limited by the consumption capacity of the 50 million urban population, even the 30 million agricultural labourers in the rural zones being supplied food from the share of the subsistence farmers on whose farms the labourers are drafted to work during agricultural seasons. According to the census of 1941, the total volume of urban population was 50 millions and the market for food grains is constituted of the effective demand of this section of the population in view of the fact that the volume of export of foodgrains is insignificant in the composition of our foreign trade.

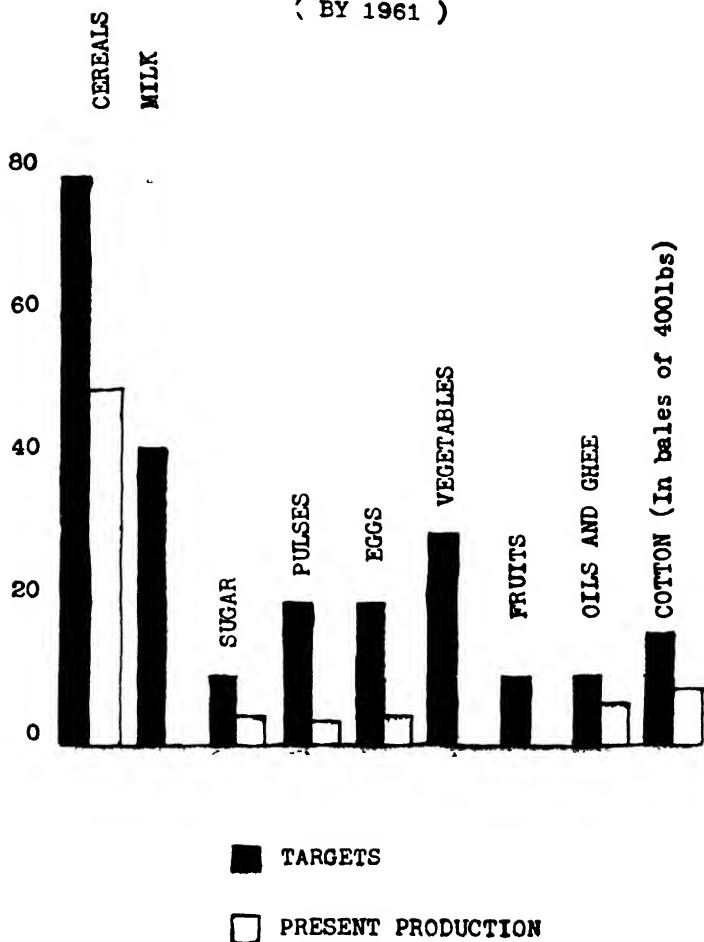
These facts are urged to show the impact of any occupational readjustment together with changes in the demand curves of food-crops on the composition of prices for food articles in the country. Our targets of production of food grains which carry the volume of food grains from the present levels of output to higher levels will have a depressing effect on prices ruling for food grains as well as for the so-called money crops, though the tendency of prices to sag may be counter balanced by a rising demand curve for food, when a large portion of the subsistence farmers of today are shifted to non-agricultural occupations.

<i>Present production as in 1938-39. (Normal year)</i>	<i>Volume in Tons.</i>	<i>Projected production.</i>	<i>Volume in Tons</i>
Cereals	40,000,000		80,000,000
Pulses	3,000,000		20,000,000
Sugar	3,000,000		10,000,000
Fat oil and Ghee	4,500,000		10,000,000
Cotton	7,00,000 (bales)		15,000,000 (bales of 400 lbs.)

With no change in the demand curves for these articles and no transformation in the formation of occupations, these targets ought to bring down prices to half the present levels in the cereal group, to one-seventh in the pulse group, to more than one-third in sugar, to more than half in the edible oil seeds group and to half of existing price levels for raw cotton. That would undoubtedly ruin our agriculturist and prepare the vast mass of humanity in the country for a devastating social revolution born of economic despair. Naturally the reconstituted targets cannot be reached without drastic transformation in the composition of the occupational system which will prevent the genesis of collapse in price formations. Reconstruction of occupations would undoubtedly change the course of the demand curve as greater sections of the population would emerge from the tentacles of subsistence economy and widen the range of markets for agricultural products. And as more people are moved from the land resources of the country and the demand for food crops is widened by the growth in the volume of nonagricultural population, not only would it be possible to

PRODUCTION TARGETS IN  
A G R I C U L T U R E  
( In Million Tons)

( BY 1961 )





stabilise agricultural prices at reasonable levels, but also to enhance the per capital value productivity for farmers with the lessening of the pressures of population on our land resources.

### Stabilisation of Prices

But price-stabilisation cannot be achieved by mere reconstitution of the occupational system of the country and the lifting of population pressures on the land resources in the rural areas. Price stabilisation is an eternal essay in economic balance. Spread of intensive cultivation, the application of up-to-date agricultural technology and a concerted programme of regional land reclamation will all create the inevitable vicious circles of an 'economy of abundance' where production will easily out-strip the effective demand for agricultural products and we will be compelled to plough back into the ground, the excess of wheat or rice that we grow or the oil seeds that we intend to harvest, if we are to keep prices from imminent collapse, as the American farmers are taught to do.

If we aim at economic balance through the medium of price formations, we cannot attain that balance without keeping prices integrated with the price formations in the other sectors of the national economic system. If shattering the framework of subsistence economy in the 700,000 villages of our country is difficult, the task of maintaining the pressures of economic advance, that we plan out, in a state of eternal balance is the most difficult task of economic administration.



Balance in the formation of occupations cannot be maintained, if price changes drive people from one occupation to another, from the less remunerative occupation to the more remunerative occupations. If such movements of resources and men among occupations are not prevented, we will never be able to reach our targets in production and without reaching them, we will not be able to ensure higher living standards for the people of the country. Planning projects would be completely paralysed by the so-called "dynamics" of price changes which will create an 'erratic' movement of men and materials among different lines of production, once we release them from the rigid unwritten laws of subsistence economy.

Even with all the schemes of greater conservation of rural resources like irrigation projects, land reclamation schemes and scientific agriculture, it would be difficult to properly implement programmes of economic advance, if price changes are allowed to change crop schedules and create abnormal movements of men and resources among occupations. The task of maintaining the contours of economic evolution through manipulation of prices will lead to complete anarchy in production schedules which will ultimately drive the civilisation of the country into a cesspool of economic collapse from which there are few valves of escape, since price changes can only be manipulated either by regulation of production and circumscription of consumption both of which would carry us beyond the frontiers of a free economic evolution of the country in which price

formations cease to be the compass of economic adjustment and progress.

Nor can mere control of production or regulation of consumption in any given area ensure stability of prices, as long as we have to live in a world which is anxious to buy in the cheapest market and sell in the costliest market. If we stabilise our agricultural prices at a level higher than the levels existing in other countries like Australia, New Zealand, Canada, America and the Argentine, our markets would be flooded with agricultural goods from these countries and our agriculture will collapse in a welter of competitive prices. In such a situation we will have to save our agriculture from ruin only by two methods: (a) by raising import duties to wipe out the difference in agricultural prices in the other countries, which would raise the prices for our food and raw materials and create distress in the urban areas besides creating bad blood with the countries among whom we have to live and on whose cooperation we have to build up our prosperity and (b) by subsidising our agriculture and preventing people from abandoning lands which have become unprofitable, which would completely destroy any balance in economic evolution that we may have pretended to reach besides making agriculture an obnoxious parasite on the other parts of the economic system by contaminating our tax-systems and starving out better utilisation of the people's money for the financing of schemes connected with public health, sanitation and the maintenance of law and order.

These observations are urged to show the importance of maintaining balance in economic evolution and the impossibility of reaching it through price stabilisation programmes. We cannot afford to make people either run away from land or run back to it by manipulation of prices. If we attempt to stabilise prices in one part of the economic system, say agriculture, we would disturb the balance of price formations in industry; and it is not easy to maintain all prices in a state of balance unless we have complete control of economic evolution and are in a position to regulate production schedules, not through the mechanism of price, but by reference to a predetermined schedule of social priorities. It means emancipation of economic evolution from the dictatorship of price formations.

Nor is freedom from price dictatorship as easy as we imagine it to be. The moment we cut ourselves adrift from a scheme of 'prices', we will have to think of some other suitable scheme of valuation which will keep razor blades and wheat in their proper places. Otherwise in attempting to escape from one set of vicious circles we will be plunging into another and more dangerous scheme of things in which we would be unable to properly administer our manpower and material resources to create better living conditions for our people. A scheme of social priorities is undoubtedly a better guide to administer the country's resources in manpower and material resources provided the spiral of social priorities to which production schemes and consumption

schedules are to be adjusted is well conceived and beyond dispute. In such a scheme of life, we would only be replacing dictatorship of prices by the distatorship of an economic autocrat, whether it be an individual or a group of individuals, whose determination of productive priorities and schedules may be contaminated by wrong or hasty judgements. The danger is all the greater where a schedule of social priorities is pretended to be determined for a vast subcontinent like ours.

### **Economic Administration**

Naturally, we cannot afford to wreck our economic system either on the Scylla of price-dictatorship or the Charybdis of a predetermined schedule of social priorities by a continental economic autocrat and we will have to plan our economic evolution in such a way that while keeping the essentials of a price system, we take out the sting in its hood by reducing the area of operation of price-influences through regionalisation of economic evolution and by corporate development of the agricultural and industrial resources and by effective circumscription and narrowing down of the boundaries of economic administration and control.

Such a scheme would imply severe reduction in the area of movements of men and materials which price changes may generate. This would make the splitting up of the country into manageable economic units where those in control of

regional economic evolution would be able to keep their hand on the pulse of economic advance and make the necessary changes and shifts in the administration of regional manpower and material resources to maintain balance in economic evolution. The very nature and magnitude of the problems of our subcontinent would easily paralyse all attempts at their solution on a continental scale and our attack on the economic problem of the country must come through reconstruction and rehabilitation of small economic units consisting of a group of villages, the area of the unit being adjusted to suit regional needs for keeping balance between production and population, and the entire subcontinent presenting the spectacle of a gigantic federation of small economic units knit together into a pattern of economic development to reach higher standards of life, with full preservation of regional economic autonomy and cultural personality.

This kind of economic evolution is not as complicated or as visionary as it reads in cold print. Problems of economic advance particularly in areas of high population pressure as in our country, are best solved by an intensive and regional attack on the zones of economic stagnation which high density of population creates, specially when the emphasis of economic evolution is an agriculture. No economic magic wand can transform our country into an England, or a Germany or a Japan or even the United States of America. Our economic problems are peculiarly our own, like our social and cultural problems

and the attack on the poverty in our subcontinent has to be along entirely different lines than those mapped out for the other countries of the world.

In this sense, no generalisation can be ventured with regard to problems of economic reconstruction and rehabilitation of all the backward tracts of the world or the high population pressure areas like India and China. Our problems of economic advance are not even akin to those of China or Indonesia or the Philippine Islands. We have to provide, in schemes of economic reform, for the play of exogenous forces of resistance like the sociological and psychological set up of the vast rural populations, the social and ethical costs of urbanisation, problems of balancing large scale industries, problems connected with the maintenance of occupational balance, problems of 'friction' in the degree of response from production and consumption schedules to price-changes, the unpredictable uncertainties of rural markets for urban goods and of urban markets for rural goods based on sociological and cultural inhibitions of an ancient people, problems of dispersion of industries to mention a few of the major economic as well as non-economic forces through which we have to seek economic balance for forty crores of people whose living standards are to be raised and maintained at a 'civilised' level.

### **Land Problems**

In implementing schemes of regional reconstruction, it is necessary that we dissolved the

complicated problem of land tenures in the country, peasant proprietorship, tenures known as 'raiayatwari' tenures, have been predominant in Assam, Bombay and Madras provinces of the country while absentee landlordism has prevailed in Bengal, Bihar, Central Provinces, and the United Provinces. Without drastic transformation of these tenures, and without intensified rural programmes for effectively implementing corporate farming, it would be difficult indeed to achieve any kind of rural reconstruction. Problems of reaching a state of balance in agricultural development cannot be solved without standardisation of land-tenures and complete reorientation of farming under corporate management of regional land resources. Production schedules must be planned by regional committees, keeping regional needs in food and essential raw materials to make each economic region self sufficient with regard to the basic needs of the local population and development of essential trade relations with the other regions of the subcontinent. In reaching targets of local production, movements of goods which might destabilise organisation of agricultural production will have to be regulated and controlled and prices for agricultural products will have to be kept coordinated with price movements in the other parts of the country. It is in this sense that stabilisation of agriculture with a view to maintain it as an 'integral part of regional economic evolution in order to implement an adequate scheme of occupational balance can in any way be achieved.

Difficulties with regard to land tenures can

be effectively met by the setting up of minimum units of cultivation and refusing to recognise subdivision and fragmentation of holdings in the record of rights and controlling transfer of lands. These measures of tenure reconstruction failed so far in view of the fact that they did not form part of any coordinated plan of agricultural rehabilitation. With the Regional and Zonal economic administration assuming full responsibility for maintaining the regional scheme of occupations in tact and ensuring for every able-bodied individual a reasonable standard of living in the context of regional social and cultural development, individualism in land ownership can be shattered over the greater part of the subcontinent and lands in each rural region be made the collective property of the regional administration which will develop irrigational projects, determine crop schedules, maintain the framework of agricultural and industrial employment and ensure a balanced structure of incomes for farmers as well as for industrial workers and secure for the population of the country all the essentials of a higher standard of living from the other regions of the country as well as from the other countries of the world.

Such a scheme of life is not novel to our country as our traditions in village development under the Panchayat raj had recognised all the contours of a corporate type of economic adjustment from time immemorial. There are tracts in the country where land was not the property of any individual but was the uncontested property of the village community and farming was a sort



of usufruct, whose rights were recognised by the village communities. The functioning of these Regional Administrations differed from one part of the country to another according to the social and cultural context of the specific areas concerned. In several places cultivation of crops and production schedules were planned according to regional needs, farmers were shifted by rotation, the annual agricultural produce pooled together at harvest time and portions of the total produce were distributed to the cultivators, the village artisans, the village food *r  serve* funds and for the maintenances of the destitute and the orphans in each village by the village panchayat and King's dues provided for from the collective pool. In such a system not only was each village a complete economic unit, but inter-village as well as inter-regional movements of population were effectively prevented as each village panchayat had been invested with the responsibility of conserving the natural as well as human resources which came to its share, and only the finer artisans migrated to the urban centres which were often courts of kings.

### **New Forces in the Village**

In the new economic context, organisation of rural life is not so simple as in the earlier epochs in view of the pressure of new forces which have shattered the solidarity as well as placidity of village life. Automobiles have broken the isolation of the village and articles of the new century

like the cigarettes and razor blades, mill made cloth and kerosene oil have destroyed the pattern of economic self-sufficiency which each village had built up in the process of its evolution. The villager today will not be content with provision of food and clothing alone; he will demand articles of comfort like the radio and gramophone, hospitals and schools, better roads and bicycles and articles of reasonable luxury manufactured abroad. The touring cinema and circus have enlarged the cultural horizon of the rural population and organisation of rural life in the country in the new cultural setup would have to be a delicate structure of economic and cultural balances which would undoubtedly complicate problems of village administration.

Efficient rural administration would imply wider range of coordination and the breakdown of the economic self-sufficiency of each rural unit if living standards are to be raised to twentieth century levels. Logically today, the unit of economic administration cannot be the village but a group of villages forming an administrative zone or region, with a democratic body of executive which shall organise the different departments of economic evolution to maintain not only an adequate structure of economic self-sufficiency but also keep regional economic evolution balanced with the contours of the general economic advance of the country. This body will have to plan out every aspect of economic evolution like: movements of population between regions, price stabilisation schemes, mapping out of crop

schedules, organisation of regional industries, land reclamation projects through irrigation and deforestation, forest policies, development of intra-regional and inter-regional transport, determination of social priorities in production both agricultural and industrial, propagation of agricultural and industrial exhibitions, fairs, fetes and all the other essential activities of higher communal life; provision of education, health and sanitation for the regional population, provision for social security schemes in each region like the care of the old and the sick, the orphaned and the destitute, and the management of regional finances and the provision of banking and financial facilities for the better utilisation of regional manpower and agricultural and industrial resources to give some of the major departments of economic administration that will have to be well planned out if we are to reach better patterns of living for the population of the country.

It is only by such an intensified regional attack on the fundamental problems of economic life that we can solve the problem of balance for the vast population of a subcontinent like ours. There must be complete decentralisation of economic power without which economic administration in our country would be impracticable in view of the degree of differences in the social and cultural evolution of different regions of the country and the need to preserve regional cultural and social personality unimpaired by schemes of economic advance that we may plan out. Without possession of special knowledge of the regional

problems and of the specific operation of forces of resistance to changes in the patterns of regional life, no plan of economic advance can be carried to its successful termination, much less can plans of rehabilitation be intergated into the regional pattern of living. In this arduous task of economic reconstruction of our vast subcontinent, we shall have to build up a new society from the very foundations to prepare it to withstand the ordeal of cultural, social and economic adjustments to the patterns of living of a progressive world. The task is at once immense and complicated and is an essay in the adjustment of delicate checks and balances, specially when plans of regional economic rehabilitation are to be integrated into the framework of continental economic evolution to reach higher standards of life for the masses of the country.

### Change of Emphasis

In the years to come, we must shatter the overwhelming importance which agriculture has gathered round itself today in the economic evolution of our country, though agriculture will continue to be the base of the economic system that we should plan to build. Reconstruction of the pattern of living for the people cannot be reached by any other route. Reduction of the influence of agriculture in our national economy does not mean complete rural depopulation and the building of vast metropolitan areas and the emergence of giant industries with complete trans-

formation in foreign trade. Our country cannot stand it, because the vast sections of the population will not brook urbanisation of their lives which would imply revolutionary changes in their ways of living destroying the very foundations of peaceful living. The world will not allow such a reconstruction of our economic life because every country is not only anxious to maintain its economic balance within itself but with the other countries by building up economic and cultural relations which would setup a world order in which international wars are completely eliminated.

Naturally, India cannot, for a long time to come, pretend to build up either large scale agriculture or large scale industries if she attempts to balance the living standards of her vast population in the economic and cultural climate of the twentieth century. Such a pattern of economic evolution will not help her to balance her population pressure nor can it ensure reasonable economic stability for the population that we shall accumulate in the natural process of population growth in future years. Nor can she reach high levels of technical advance that the other countries have reached as such technical advance that will create giant problems of manpower utilisation and employment rates, and would defeat the setting up of any satisfactory pattern of living for the people of the country. We must clearly avoid heading towards the crisis in economic evolution which countries of high degree technical progress like America have created for them-

selves. Such a path of economic evolution is the surest road to economic ruin and social revolution born of despair.

Consequently, if we are to plan our evolution with peaceful and prosperous patterns of living in the years to come, we must preserve and propagate balance between all occupations necessary to reach better designs of living. This would make our country a land of medium size agriculture and of small efficient modern units of industries located in the rural areas to balance population pressures and our economic landscape would present the panorama of a gigantic federation of numerous small economic units, modernised and self-sufficient in their production schedules, maintaining peaceful economic and cultural relations with the other economic communities in the country and of the outside world.

## BOOK III

### EMPLOYMENT AND INDUSTRIALISATION

#### Illusion of Progress

There is an overpowering illusion in almost all countries where agriculture has been the predominant occupation that industrialisation is the "open sesame" to the Ali Baba's cave of untold wealth and prosperity. The gold and glitter and the external opulence of the great Metropolitan powers that we witness in giant urban centres of the world like London, New York and Berlin are in part responsible for this illusion; but we forget the vast areas of slum and starvation, the complicate problems of human relations and rehabilitation that are hidden behind the civilisation of Bond Street and Broadway.

There is a giant shadow of economic distress behind the vast stream of humanity that incessantly flows along the wide metropolitan avenues in shining Limousines and the pedestrian buses, flocks the rushing suburban trains, moves down the escalators into the tube-ways, and chats and talks in dazzling restaurants filled with puffed up mannequins parading the latest triumphs of the dress makers' art and sits sipping wine to the wailing waltz of a uniformed orchestra, the 'de luxe' grill rooms where varied waiters and waitresses scurry with loaded dishes to a mass of humanity which has lost its appetite for the good things

of life and incessantly renews its hunger with patented digestion pills and its humour with aspirin tablets and costly champagne from the vineyards of Southern France or fashionable drinks from far-off Russia or the cellars of Spain—are only the mere external attire of a metropolitan civilisation.

A rural civilisation has no such pretensions to what is called 'artificial living': there is no speed, no shine, no glitter; nor does it have to wait for milk trains and dairy services, to have its morning cup of tea. Nor does it attempt to hide the debris of human misery behind sky-scrapers or the well-filled shops of the main avenues. Nor does humanity here attempt to camouflage its knitted eyebrows from the stock-exchange or from the automatic news-strip behind a glass of sherry and cheer itself up in the nonstop variety halls or the vast opera houses. Nor does it need the stimulation of a symphony orchestra to put it back into a mood to fight the incessant economic and financial battles of the morrow; yet there can be little doubt that there is an uncanny glitter about a metropolitan civilisation which is lacking in the very build-up of a rural civilisation. There is the vast entrancing horizon of opportunity and opulence in a metropolitan civilisation which is lacking in rural civilisation. There is a beckoning glitter on the metropolitan skies which creates the illusion of unlimited wealth and prosperity and hides the grim problems of social and economic insecurity, of squalor and starvation, that stalk in the dark alleys of the metropolitan areas.



As long as human civilisation is an incessant struggle to reach a state of balance and maintain it, and as long as the avenue of balancing a civilisation are wide, yet few, congested and one-way traffic routes, we cannot get rid of the major illusions of economic evolution. A country with a greater emphasis on its industries and its foreign trade will, when it loses its balance in a world which is fast growing into technical maturity and reduce its foreign trade, turn back to economic nationalism and de-urbanisation of its civilisation as one of the escapes from the inexorable crisis in its economic evolution; or try to build up what has become today discredited as economic 'coprosperity zones' with some of its satellites or construct a "bilateral" system of economic cooperation to maintain its own economic balance in a complicated world civilisation. Similarly, a country whose main problems are created by an over emphasis on agriculture in the process of its economic evolution will attempt to solve them by developing along the one and only other route of economic evolution: viz industrialisation. This is the legendary pot out of which the ghosts of civilisation are incessantly invoked.

### The Blind Wall

In this sense, there is much to be said for industrialisation as a powerful engine for the restoration of balance in regional economic evolution, as unfortunately we have so few attractive avenues of economic advance, specially for a

country which has been condemned by sheer forces of evolution, into the rural ways of living. Not only are the main avenues of economic evolution for any country limited at any point of time, but even the sources of raw materials as well as the markets for finished goods are, equally unfortunately, limited: The world's resources for the creation of wealth are predetermined, firstly by the natural processes of recuperation as in agriculture, mining and fishing, and secondly by the speed with which we utilise them or consume them as in the case of all industrial processes. If the speed of utilisation of world's resources outstrips the tempo of the recreative processes of nature, we must face a blind wall in world's evolution towards better patterns of material civilisation. The blind wall in the evolution process creates the will to find a way out of the cul-de-sac and creates the atmosphere for intensive scientific and technological research and invention. The way is tunnelled through ; the mass of humanity rushes into it and ambles along till it comes into another blind wall and the process is merrily repeated, the march is renewed and we climb up the ladder of civilisation slowly but steadily and inexorably into an ever-widening horizon of human civilisation, finding out new ways of using old resources, new combinations and formulae, new processes and inventions, new opportunities and new modes of adjusting and manipulating the resources that we possess, new sources of power for industries, new methods of transport as old ones become obsolete with the drying up of old sources of energy, and the vast

and complicated caravan of civilisation moves on to new pastures reconditioned from the debris of old. That is how balance is struck at each halt in the evolution process of mankind, and each attempt at balancing will reveal gaps in the scheme of civilisation which are to be filled up if mankind is to proceed on its journey to the unknown promised land of vanishing frontiers. Unfortunately in this vast procession of, what Condorcet called, the "human spirit" there is no way back without choking the very lungs of human civilisation. Nations must move on with the rest of the world, if they are to survive in the Darwinian struggle for survival. In this march towards plenty and prosperity, every epoch of evolution looks as if it was the best epoch and its problems were the last problems in the reaching of a balanced design for living; but the unchartered ingenuity of human brain will incessantly create new vistas of material civilisation through the process of invention and research. The fog that hangs over mankind is lifted and the chase for new pastures is renewed with fresh vigour and enthusiasm.

India today has reached one of these celebrated blind alleys in economic evolution. That the only valve of escape for a country like India with an overwhelming emphasis on rural evolution and with heavy population pressures lies through industrialisation is a thesis which can hardly be contested. For a long time, the country has remained with an unbalanced economy and her economic evolution in the last two centuries has precipitated major problems of human relations

and economic adjustment. Her problems of poverty and social security have reached a point of exasperation and become increasingly complicated by the normal processes of population growth which go on intensifying the degree of economic distress that has spread over our country.

This crisis in economic evolution has been created in our country by our failure to seek balance for the ancient civilisation of the country with the forces of world economic evolution in the last two centuries. No attempt was made to lift the country out of the cultural framework of the preceeding epochs of her long history and dispel the stagnating twilight of economic distress which is the result of the clash of the new and old processes of cultural adjustment to remodel the designs of living with the evolution processes of the vast technical and scientific advance of the last centuries. Consequently in the new order of world civilisation, India could not reach any sort of balance in the administration of her vast natural resources; nor could she utilize the giant mass of human energy she went on accumulating from year to year. She has naturally created baffling problems of human relations and social mal-adjustment which always attend a civilisation which does not possess the internal momentum that is necessary to carry it out of a period of transition into an epoch of adjustment with the new forces that shape the contours of world civilisation.

The prospects of continuing any longer in this shifting fog of economic perplexity are indeed

grim. India must reach a state of balance with the tempo of economic progress in the other parts of the world, if she is to survive and ensure proper living conditions for the vast populations that have come to her share. She can only reach this state of balance by rebuilding her entire civilisation to suit the chops and changes of world cultural and material progress through fuller 'employment' of her material resources and the energies of her populations, so that she might create the material conditions necessary to reduce the zone of economic distress that is existing today and is showing sinister signs of expanding itself with further additions to the volume of population in the years to come.

### Balance of Occupations

Obviously, in a country where the processes of economic evolution have intensified pressures of population on agrarian resources, balancing of civilisation can only be implemented by balancing of occupations to sustain growing pressure of population on regional resources. There is no other sane way of solving the giant problem of poverty in the heavy pressure zones of the world. In this task two considerations will have to be kept constantly in view: (a) maintenance of a spiral of adjustments which would effectively balance population pressures with regional resources; (b) implementing a frame-work of economic administration that would keep the economic evolution of the country in a state of balance with the forces of world economic progress.

If the first task is difficult of accomplishment, the setting up of a scheme of adjustments which would keep regional evolution adjusted to forces of world economic progress is the more difficult to reach. Programmes for the fuller utilisation of regional resources would undoubtedly clash with schemes for the building up of economic relations with the outside world, and, in this clash, it would be difficult to maintain the schemes of internal reconstruction from being vitiated by forces of world economic relations that are necessary to balance regional economic evolution with world economic progress. The one factor that will create disturbances in the state of balance is the unpredictable phenomenon of technical advance and its impact on the contours of world trade and on the tempo and structure of agricultural and industrial production in the older and more backward countries of the world.

Obviously, the task of balancing of economic evolution in the backward zones of the world is highly complicated by problems of internal balance as well as problems of international balance in economic evolution. The magnitude of this problem becomes patent when we take into consideration the fundamental fact that no reconstruction of production at world levels would be possible in the backward zones without technical and financial aid from the metropolitan powers of the world, who possess the key to the treasure house of economic advance. Nor can it be pretended that the task of internal balance in economic evolution in the less advanced countries of the

world, with high population pressures on agricultural occupations, can be reached by advanced methods of production with high degree technical advance where industrialisation would be unable to maintain employment rates to lift the pressure of population from rural occupations.

The high population pressure areas, like India, are today suffering from immense waste of human energy as well as of material resources. In India, the colossal waste of human energy becomes patent when we realise that the area of technical advance is practically negligible and agriculture, which is the main occupation of the people, cannot provide employment to those who are engaged in it for more than six months in the year even in areas of double-crops, resulting in heavy loss of manpower every year.

### Use of Manpower

The main problem of the country, therefore, is the problem of utilising the vast manpower and coordinate that manpower with material resources to reach higher living standards for the population of the subcontinent. The stature of the problem can be brought home by the following data :

#### EMPLOYABLE AGE-GROUPS. (in millions).

	1931	1941 (estimates)
Ages : 15 o 60	177.7	212
Men :	91.5	108
Women :	86.2	104
<i>Actual Workers</i>	120.1	142.5
In agriculture :	103	122.3
Non agricultural occupations:	17	20.2

(In building up this table, estimates for 1941 have been made on the basis of the ratio of population changes from 1931 to 1941. These estimates can be allowed at least ten per cent of margin of approximation in view of the fact that in agriculture, child labour even below the minimum age is employed, thus swelling the ranks of those who actually work on the farms. Similarly, in estimating the figures for 'employable' groups, only 50 per cent of women workers are taken as those who can be gainfully employed though the ratio varies among regions according to variations in regional practices and conventions. In this sense, it is quite possible that the margin of gap between actual workers and those who can be employed would widen as more sections of the population can be brought under the head of total workers who can be employed and the volume of actual workers reduced in the light of the age-groups that have been selected in the construction of the above table.)

If we are to reduce these figures to man-hours, we shall be able to gauge the colossal waste of human energy in our country. In perennial factories of the country, the average man hours of work can be taken to be 2600 hours per annum at 50 hours per week, while in seasonal factories, the annual man-hours can be taken to be 1040 hours per year since these industries work only during agricultural seasons from four to five months in the year, and in mines the annual man-hours can be put down at 2080 hours at forty hours per week for the entire country : and



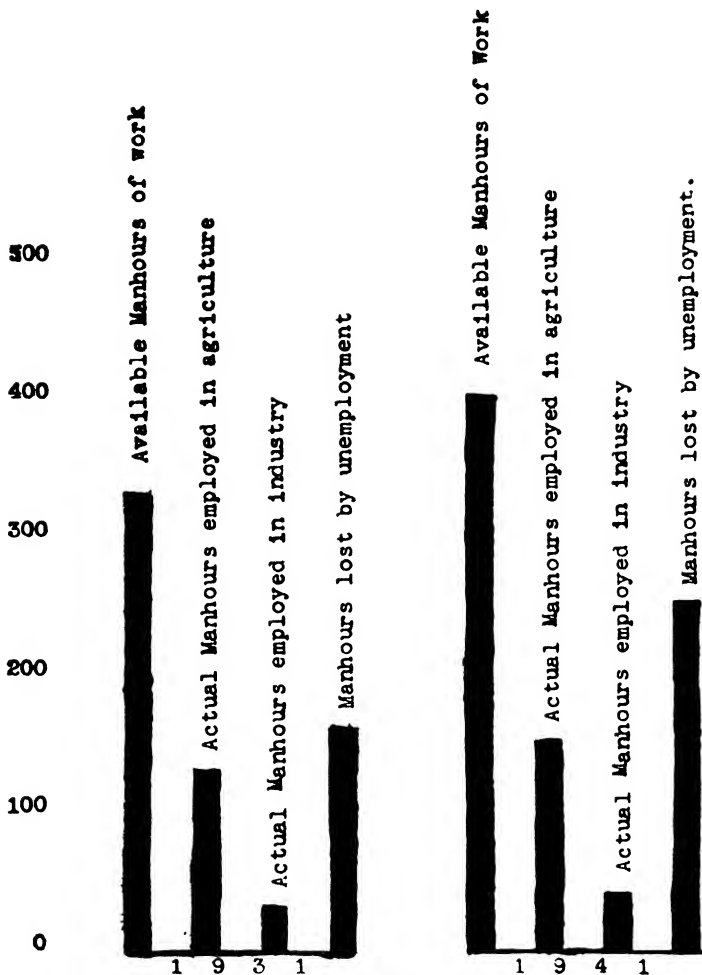
agricultural man-hours can only taken to be half of those in industry, as agricultural employment hardly exceeds six months in the year.

Assuming an average of 2500 hours per annum per worker, we shall be able to get an idea of the "employable" man-hours and the actual man-hours that we are utilising today from the accompanying table:

MAN-HOURS (in billion hours per annum).

	1931	1941
A. Employable Man-hours:	337·5	405
B. <i>Actual Man-hours of</i> <i>employment in agriculture:</i>	133·9	158·6
Non-Agricultural Occupations:	35·7	42
Total:	169·6	200·6
Man-hours not employed (A-B)	167·9	204·4

This table reveals that half of the man-power in the country which can be otherwise utilised for reaching higher standards of living by producing articles of general consumption is annually going into the scrap-heap of 'un-employment'. In other words, only 80 million people unaided by any up-to-date implements or methods of scientific and technical advance, were attempting to



MAN-HOUR CHART  
(in billion man-hours per Am)



balance the standard of living of 320 million people in 1931 and 100 million people are attempting today to sustain the living standards of 380 million people, with very little advance in the technique of agricultural as well as of industrial production. The extent of poverty that prevails in rural areas can well be imagined when each person producing sixty rupees worth of agricultural commodities per annum has to support three people's standard of life, which works out at Rupee 1, annas ten and pies eight per month per capita ! This would give us Rs. 20/- of gross income per capita per year in the rural areas of the country which compares very "favourably" with the average annual income of Rs. 14/- per capita in the Matar Taluka of Gujerat which "is better off than many other provinces of India" (J. C. Kumarappa. The Economic Background) and of Rs. 12/- estimated by the C. P. Governmental survey committee on an economic investigation into 800 villages of the Central Provinces.

### Avenues of Progress.

In such an economic background, the only avenue for reaching higher standards of life for the people happens to be industrialisation to break up the congestion of population in the rural areas of the country and specially on agricultural occupations, if we are to balance the capacity of the population to provide themselves with the essential goods for better patterns of living with the development of markets for industrial and

agricultural goods and services. 'The other route is that of reconstructing the agricultural and industrial markets and price-formations to balance rising standards of life for the four hundred million people with an annual per capita 'income' of Rs. 20/-. Such a reconstruction of national markets and price-formations would be a fantastic scheme and would involve intensive "automatisation" of industrial production processes in a drive to reduce costs of producing industrial goods with complete revolution in agriculture which would displace man with machines, with futuristic curves of all production with a phenomenal development of the science of photosynthesis in plant biology as envisaged by Waldeman Kaempfert according to whom (see Stuart Chase: *Economy of Abundance*) wheat is said to mature in a month, vegetable would be ready for the market in two weeks and the setting up of the pattern of a civilisation of abundance where man would be completely released from the toil of producing the essential requisities of his everyday life with integrated programme for the complete conquest of both materials and time. Such a civilisation is yet in the womb of time and the technical and scientific knowledge that we possess today, together with the institutions both economic and social that we have built up in the world we live in, will not permit the coming of that millennium in which automatic machines work on the farms and factories and allow the mass of mankind all over the world to simply stretch themselves and day-dream. Except in such a world of technical and scientific nirvana, it would not be possible

for any mechanism of the market to adjust agricultural and industrial prices to balance the standard of life of the people of the country, (with the income they are getting today) at twentieth century standards of living comforts.

Nor can India pretend to build up her economic system along competitive lines to capture world markets and maintain balance in the structure of occupations, at the same time, which is necessary, if the immense pressure of population in each region is to be balanced on regional resources. Our problem of balancing the future economic civilisation of the country can be said to consist of certain essential adjustments: (a) reconstruction of "employment" so as to relieve heavy population pressures; (b) reconstruction of agricultural and industrial incomes to give each family the income resources to provide for themselves all the essential requisites of higher standards of life; (c) provision for all the amenities of public life to maintain the framework of economic adjustments necessary to keep up employment and income at adequate levels, with all the necessary shifts and changes in public expenditure on educational institutions, social security schemes; (d) maintenance of adequate transport and financial facilities and regulation of trade, internal as well as external, to give only a few of the major adjustments that would be necessary to balance regional population pressures with regional resources through better utilisation of manpower and material wealth of each region

## Rebuilding Employment

Rebuilding of the occupational system of the country would mean complete overhaul of the existing non-agricultural occupations together with the starting of new industries to balance population pressures. According to the occupational census as collected in 1931, apart from agriculture, the textaile group provided employment to 4·5 million people out of the total industrial population of 17·5 millions, making a total of over 25 per cent of the entire industrial population of the country. The next group of industries which absorbed 3·9 million workers was the dress and toilet industry, including barbers, hair dressers, wigmakers, and the washermen, followed by the transport group which accounted for 2·7 million workers including Palki bearers and owners of elephants, mules and camels, thus making a total of 10·6 millions covering over 65 per cent of the total population in the industrial group. The next large group is that of 'Trade' which absorbed 9·3 million persons ranging from Bankers to dealers in asses and mules. Professional and liberal arts beginning with priests and ending with conjurors, acrobats and exhibitors of wild animals accounted for another 2·7 millions and Public Administration absorbed 4·8 millions. The miscellaneous group accounted for 23·2 millions, domestic service alone absorbing 12·6 million people or more than 50 per cent of the entire group and 'insufficiently described occupations' accounting for 8·4 millions, practically bringing up the total to

21 millions in the groups. The organised industries on modern lines had absorbed, in 1938, the year of 'normal' employment-rate, only 1,737,755 people for the entire country, covering practically every industrial establishment both perennial as well as seasonal. Thus the entire industrial system consisting of textile industries, engineering industries, mining and metal works, food and tobacco factories, chemical and dyeing establishments, paper and printing industries, cement factories, rubber industries and rice mills of all kinds and size coming under the Factories Acts, could not absorb even 2 million workers or even 1/2 per cent of the entire population of the subcontinent.

The entire structure of existing occupations would betray its hollowness, if put in the form of a percentage ratio table based on the census of 1931

**Actual workers to total population**

		<i>Ratio to total population in employable age groups.</i>	
A. Agriculture	36.5%	A. Agricultural	58.2%
B. Preparation and supply of material substances including textiles, the steel group, chemical industries, transport and trade	7%	B.	13.5%
C. Public Administration		C.	2.2%
D. Miscellaneous	3%	D.	6%
		Not employed	20.1%



In the industrial structure of the country today, easily the first place in point of absorption of the labour force of the country is taken by the cotton textile industry which had over 5 million workers in 1938 for a total industrial labour population of 1.7 million making an aggregate of about 30 per cent of urban labour force. Next come the jute group of industries with 295 thousand workers or about 18 per cent of the workers in organised industry, with the entire textile sector of the industrial structure absorbing about 838 thousand workers or about 50 per cent of the entire industrial labour population or over 65 per cent of the labour employed in all the perennial industries of the country. Next in importance, in point of labour absorption, comes the rice grinding industry with 43.6 thousand workers and the general engineering industries with 42.4 thousand workers, followed closely by the iron and steel industry with 38.2 thousand workers in 1938, among the perennial group of industries.

Among seasonal industries, cotton ginning had the biggest labour-force with 129 thousand workers out of a total of 295 thousand in all seasonal factories or about 40 per cent of the labour force in the seasonal sector of the industrial system of the country, closely followed by sugar industry with 73.5 thousand workers or about 23 per cent of the group total.

A brief outline of the industrial system of the country would afford us an idea of the

capacity of the existing industrial structure to absorb labour, and the line of evolution of the industrial system which we shall have to plan if we are to reach any state of balance in the future economic evolution in our country. From the point of view of the provincial distribution of industrial units, all the provinces of the Indian Dominion except Orissa and Assam had the cotton industry, while the silk industry was distributed in all the provinces except Orissa, Central Provinces and Assam among the major provinces. Woollen industry did not exist in Madras, Bengal, Bihar Orissa and the rest of the Provinces of the Dominion and was heavily concentrated in Bombay, the Punjab and United Provinces. General engineering was spread out over all the Provinces with heavy concentration in Bengal with 57 per cent of the total labour force in the entire industry. The paper industry was localised only in three provinces of the Dominion: Bombay, Bengal and the United Provinces, Bengal leading the rest of the country. The glass industry was also heavily localised in the United Provinces and Bengal and in the chemical group of industries, the leading place was taken by Bombay closely followed by Bengal, both of which together having about 64 per cent of the entire labour population in that group of industries. In the soap industry Bengal and Bombay led the rest of the country, so too in the match industry. In the sugar industry, the United Provinces and Madras topped the list.

From the point of industrial establishments coming under the Factories Administration in

India, Bombay led the rest of the country with 30 per cent of the total number of factories in the perennial group, followed by Bengal with 22 per cent and Madras with 21 per cent of the total industrial establishments for the entire country. In the seasonal group of industries, Bombay held the top place followed by Assam and Madras, Bengal coming fourth in matter of industrial establishments.

These foregoing data point to the conclusion that only three provinces of the subcontinent had some industrialisation of the modern type: Bengal, Bombay and Madras, with the United Provinces and the Punjab showing some signs of diversification of the structure of occupations. Two factors have been responsible for this trend in the economic evolution of these provinces: (a) the early contact with the progressive countries of the world which some of these provinces like Bombay, Madras and Bengal had together with the availability of technical skill to build up and maintain mechanised industries (b) the heavy population pressure in provinces like Bengal and Madras and the economic pressure to which the impoverished rural population of the Deccan and Konkan coast were exposed in the latter half of the 19th century, facilitating the formation of labour force necessary to man the industries on modern lines. Again growing population pressure has carried the process of industrialisation to the United Provinces and Central Provinces has comparatively a more recent trend in economic evolution in view of the difficulty of securing

adequate technical help for large scale industrialisation and the difficulty of developing sources of industrial power, the United Provinces having no coal and hydro-electric energy which Bombay has possessed or the coal deposits which Bengal has commanded throughout the process of her industrial evolution. The Raniganj collieries of Bengal and the Tharia coal fields of Bihar produced over 72 percent of coal in 1935 and 23 million tons of coal out of 28 million tons for 1938 covering over 82 per cent of total production of coal in the country. The Raniganj collieries started working from 1820, while the coal fields of Bihar which produced even in 1938 about 53·5 per cent of total coal mined in India started working late in the 19th century. These factors have determined the scope of industrialisation to the provinces mentioned above, though in more recent times, a tendency for dispersion of industries in the other parts of India has been a predominant feature of the economic evolution of the country.

### **Power Resources : Coal**

These few foregoing observations demonstrate the magnitude of the task of reconstruction of the industrial system of the country to maintain balanced regulation of population-pressures on the occupational structure of the country. With regard to power alone, for the greater industrialisation of the country, it must be stated that no greater industrialisation can be supported without

saveloping new sources of hydro-electric power, as the production of coal is hardly enough for the existing industrial and transport system if they are worked to full capacity. As early as 1935 itself, the total of coal produced in the country was not enough to meet the rate of coal consumption for the industrial and transport systems of the country and in 1935-36, we were importing about 60 thousand tons of coal per annum from Natal, East Africa, Japan, Holland and Australia. The increased rate of coal consumption in the world war of 1939-45 opened up wide gaps between production and movement of coal and brought about a shortage of coal which has persisted till today as shown by the rationing of coal supply to industrial as well as domestic uses.

. Further, standardisation of coal prices will also present enormous difficulties in view of the vast differences in the value of coal in different parts of the country. According to price statistics available for 1938, the price of coal has varied from Rs. 2-15-4 at Bihar Collieries to Rs. 8-15-1 Assam. Nor was there much difference in price between home produced coal and imported coal taking due consideration of quality at some places of the country like Bombay and Karachi, At Bombay, for instance, Natal coal sold at 21s. 2d. per ton, while Indian coal was selling at 175· 9d in 1935 and at Karachi Natal coal was selling at 225·2d, while Indian coal was selling at 21s. 2d per ton.

## Oil Power

Nor is the situation with regard to power oil happy. Only Assam and the Punjab have petroleum sources, and in 1938, Assam produced 65.9 million gallons against 255 million gallons of Burma and our total production of 87 million gallons. The whole of India naturally produces only one third of petrol produced in Burma with heavy localisation of oil in Assam where over 75 per cent of the total petrol resources of the country are concentrated today. Naturally oil power will present the same problems of price stabilisation which coal resources present together with problems of insufficiency regarding power requirements for any greater drive for the wider industrial development of the country, unless an intensive geological survey of the country reveals hitherto undiscovered oil zones—a proposition which is highly problematic.

## Hydro-Electric Power

The fundamental limitations of the country in regard to coal and oil as sources of industrial power would necessitate building up of economic relations with Roumania, Iran, European and American oil zones and to maintain our expanded transport and industrial systems in the years to come and emphasise the stupendous importance of new hydro-electric projects to supply power for industries and short distance transport systems that would be developed as an integral part of general

developmental schemes in the country. With the building of multipurpose river valley development schemes, there can be no doubt about the future of electricity as the most important source of industrial and agricultural power in our sub-continent. In this regard, it is necessary to emphasise that we have passed the age of coal and oil power for larger industrial units, and the recent developments in industrial and agricultural technology lay on overwhelming importance on electric power which alone can reach the standards of scientific accuracy in the flow of energy without which the automatic working of higher technical plant cannot be properly maintained. It is needless to urge that hydro-electric power would be the cheapest source of industrial and agricultural power and can be utilised for several purposes like the lighting of cities, short distance transport system like tramways, trolley buses and suburban railways, and other purposes to an extent, to which neither coal nor oil can be used.

This makes it imperative that we tapped every source for the generation of cheap electric power which alone can successfully implement schemes of greater industrialisation of the country, and determine the zone of operation of coal and oil as sources of power to long distance transport like trans-continental railways, short distance "erratic" transport systems like the automobile system which would attempt to link up land locked rural units with the other parts of each economic zone and the industrial units which cannot be reached by the network of hydro-electric trans-

mission systems that may be constructed in the various parts of the country.

It is particularly necessary that, as far as possible, we carried the country to a state of self sufficiency in regard to our power resources, which we can only reach by reducing the area of coal and oil as sources of power in the industrial system that we may plan to set up in the country and widening the reach of hydro-electric power through an inter-connected transcontinental system of hydro-electric power transmission and through the tapping of all available sources for the development of electricity as the chief source of power in our industries as well as in our agriculture.

Until new sources of industrial power are developed, it would not be possible to support the power requirements of an intensive drive for the greater industrialisation of the country; nor can we avoid import of coal and oil from the other countries of the world during the period of construction of multipurpose river zone development projects which would generate and distribute hydro-electric energy that would make us self-sufficient regarding the power requirements of the industrial system of the country. This would make Indo-Burmese, Russo-Indian, Indo-Persian, and Indo-American trade and economic relations inevitable in regard to industrial oil during the period of reconstruction of the power resources of the country.



## Electrical Engineering

Nor can we hope to conserve the water wealth of the country to generate hydro-electric power without importing a major part of electric power generating plant as well as upto date industrial plant and agricultural machinery to sustain industrialisation schemes of the country. The problem of balancing power costs with the general cost structure of the industries on the one hand and the price for products of industries in an internationally competitive market for industrial goods on the other has rendered a greater part of the existing industrial system under private management obsolete by making the modernisation process of industrial plant necessary to use electric power "uneconomic" even in some advanced parts of the country like Bombay and Ahmedabad and in the more recently developed industrial centres located in the interior parts of our subcontinent. The growth of the electrical engineering industry in our country is today confined to the mere reconditioning of bulbs, reconditioning and assembling of electric dynamos, the manufacture of transformers and fans and other electric goods of general 'lower' consumption like insulators, switches, brackets and light shades. Even in this line of electrical engineering, Bengal has led the rest of the country with a labour force of over 50 per cent of the total labour population employed in electrical engineering industries, Bihar coming second and Bombay third with 625 and 538 workers respectively. Bengal had fourteen electrical engineering

establishments, Bihar had one, Bombay ten and Madras two. Among the Indian States, Mysore led with six electric factories, Hyderabad and Baroda had one each and the Rajputana State had three establishments, according to the industrial census for 1938. Even the stimulus according to the development of electrical engineering industry during the world war of 1939-45 is hardly enough to make the industry grow to a stature which would support any intensive drive for the greater electrification of the subcontinent without heavy imports. In the decade from 1929-30 to 1938-1939, the year in which the world war broke over, our imports of electric controls switch gear, generators, alternators, dynamos and electric motors had increased from Rs. 126.1 lakhs in 1929-30 to Rs. 190.0 lakhs in 1938-39.

The magnitude of the generation of electric power from all sources, if we are to reach any state of self sufficiency with regard to our power requirements to sustain the targets in industrial evolution, can be appreciated when it is stated that our electric consumption will have to reach at least fifty times the present level of consumption. At present we are consuming about 5 kws. of electric energy per capita, and we must at least raise the consumption of electric energy to 25 kw. which would only mean about one fourth of the per capita consumption for U.S.A. less than half of that for Britain and for Australia. There is no other alternative source of industrial power that we can think of without precipitating a major crisis in the administration of our industrial and

agricultural resources: the production of coal cannot be stepped up as there is no guarantee how long our coal resources would last, besides driving us away from modern standards of technical advance which is mainly based on electric power as the principal source of industrial energy. Nor can we pretend to depend on imported industrial oils, as that would needlessly complicate problems of maintaining balance of economic relations with other countries beyond the minimum of relations which would be necessary to reconstruct the economic life of our subcontinent. In view of the enormous complications in the build up of our foreign trade which would result from abnormally heavy imports of capital equipment and industrial consumption goods that would be necessary to sustain greater industrialisation of our country, we must aim to reach a state of self sufficiency with regard to our power requirements, if we are to avoid needless complications in our export trade in the year to come, besides escaping the dire consequences of industrial and transport paralysation, if political or strategic considerations should choke up the main sources of power supply for our industrial and transport systems.

Such an enormous development of power resources would imply not only the projection of vast hydro-electric schemes, but also the generation of electricity under all the alternate technical systems that can be harnessed, and introduction and development of grid and relay systems to conserve every kw. of electric power that can be produced in the country. Distribution of electric

power will have to be planned with a network of transmission lines that would traverse the length and the breadth of the country in order to effectively implement the schemes of decentralised industrial development that would be planned to sustain a reconstituted structure of occupational balance over the subcontinent.

### Problems of Heavy Population Areas

Industrialisation in the heavy population zones of the world can never be conceived as a goal in itself, but only as a means to balance population pressures through occupational redistribution of employment density. From this angle of approach industrialisation for a country like India would have different contours from industrialisation for a metropolitan zone which adjusts its industrial structure for the conquest of an international market for industrial goods like America or England, Germany or Japan (before their collapse in 1945). The most urgent goal of all economic advance in India is and must be, for a long time to come, till the designs for living of the vast population of the country are brought up to international standards of civilisation, the balancing of employment pressures through integrated development of the country's agricultural, industrial and auxiliary occupations, so as to avoid any kind of friction with the sociological, psychological and cultural framework of the country, if we are to carry schemes of economic reconstruction to the state of successful fulfilment.

In this task, two processes of industrial readjustment would be essential (a) employment pressures of the vast populations of our country cannot be balanced without decentralisation and dispersion of industries in the rural parts of the country to avoid the cost of urbanisation of vast sections of the present population; (b) maintenance of an adequate degree of balance between "essential" and "auxiliary" industries to maintain each region of the country as self sufficient as possible, since no effective solution of the phenomenal poverty of the people can be reached without a regional attack on the specific problems of economic distress through reconstruction of the regional economic system.

Agricultural reconstruction through mechanisation of the processes of agricultural production in our country, where over seventy per cent of the population directly or indirectly balance their standards of living on rural resources, would release vast sections of the population who will have to be provided with employment in the industries which we schedule to start in each region of the country. Planning of industrial development to absorb such a gigantic block of labour force of the country and yet keep its balance with international standard of technical efficiency would present enormous difficulties. The industries started under a comprehensive programme of integral conservation of regional resources, will have to adopt up-to-date technical processes of industrial production, if they are to be balanced with the consumption-capacity of regional markets

for industrial goods. The cost of production of industrial goods will have to be adjusted to the effective demand for such goods in the regional markets. Wages for labour, which forms part of the costs of production in industrial goods, will have to be balanced with industrial costs on the one hand, with price movements for goods necessary for raising standards of living as well as with the maintenance of 'essential' employment rates on the other. The feat of maintaining a balance between employment pressures, technical advance in the processes of industrial production and price movement in secondary markets, to preserve the industrial system from being dissolved in a welter of competition from more efficient industrial zones of the world, has never been attempted in any other part of the world and is one of the unsolved problems of economic administration even in the more advanced countries of the world like America and England. It can be asserted without any serious challenge that the industrial powers of today have failed even to strike a balance between the tempo of technical advance and the maintenance of employment pressures in their industrial structures.

### Economic Controls

Any attempt to strike a balance between technical progress and the maintenance of employment pressures in the industrial system would lead to the promulgation of economic controls which would completely compass the entire

economic development of the country and carry it away from the international standards of technical efficiency. Such a process of economic advance would give us artificial control of technical development, artificial wages rates, artificial management of foreign trade relations and artificial standards of life which must be inflated by artificial income rates, which no country in the world can long pretend to maintain without destroying the foundations of its own material civilisation. Nor is the choice of the alternate processes of economic evolution easy. We must choose between keeping our industrial system technically balanced with the processes of world industrial advance or maintain our industrial system in a state of technical stagnation to sustain the enormous population, that will be released from agriculture, at wage-levels which will ensure for them both stability of employment and a rising standard of life. Such a process of reconstruction would mean, if we adopt the first line of evolution, cheaper industrial goods but rising rates of unemployment; and, if we adopt the second line of evolution, rising prices for industrial goods with rising wage levels in industry to meet the changes in the costs of living and rising incomes from agriculture to ensure stability of the markets for industrial goods. In other words, whichever line of economic evolution we choose, it seems inevitable that we faced either rising volumes and rates of unemployment or a vicious spiral of agricultural and industrial prices which would ultimately choke up the main springs of all economic progress.

There is little doubt that the only way of escape for a country, which is poised on the horns of such a dilemma in its economic evolution, is through reconstruction of its foreign trade and supplementing the falling wage rates and rate of income at home by social security schemes subsidised by reconstruction of national finances through a mounting rate of favourable balance of trade. The chances of backward countries of the world, whose command of technical progress is severely conditioned by their dependence on the metropolitan powers of the world, to attempt such a line of economic evolution are indeed very slender. Such a line of evolution would only steepen the struggle for sources and markets and would plunged the countries, who attempt their own economic stabilisation through foreign trade, into the vortex of incessant wars with their competitors in the neutral markets of the world. Nor can the backward countries of the world pretend to stand up to competition with the great metropolitan powers with the single advantage of lower wage rates that they possess, in an age in which wage rates are slowly becoming less significant in the composition of cost structures in industry with the progressive 'automatisation' of the processes of industrial production. The world of today is fast moving towards making all industrial processes 'automatic', where an intricate chain of high precision machines would time out all production processes and would produce industrial goods at a speed which would flood the markets of the world, with a few persons sitting before complicate control boards in charge of an entire industrial plant.



It is quite plain that in the context of the enormous progress that is being planned out in the industrial research laboratories of the world, that employment rates can only be kept up either by severe stabilisation of industrial plants against high degree technical advance or by a perpetual spiral of social security schemes which are financed from the earnings of industries and agriculture which are tuned up to maintain an ever-increasing volume of foreign trade. The first would set up an artificial industrial system which would be impotent either to maintain employment rates for a long time without contaminating the other parts of the economic system with its menacing disease of technical inefficiency and which would be wiped out in the ultimate analysis by imports from the other advanced industrial zones of the world, in spite of all the tariff protection that may be planned. No protective tariff can protect a technically inefficient industrial system, if it is planned to maintain artificial employment rates at artificial wage levels. Nor can we attempt to maintain our industrial system immune to world's progress in the processes of manufacture, in view of the unchallenged fact that we shall have to keep up an export trade which would enable us to pay for the imports that we buy from the other countries of the world in capital and consumption goods that we need to reconstruct the economic system of the country.

Nor can we solve the peculiar difficulties of balancing our economic civilisation along the industrial front by keeping some industries regionalised and adjusted to the consumption capa-

city of regional markets for industrial goods and reconstruct that part of the industrial structure which would be essential to maintain foreign trade relations with the other countries of the world. An economic system which is in part 'open' and in part 'closed' is a contradiction in terms, and cannot, for any length of time, keep up its balance with the main trends of world economic evolution in the days to come.

All these arguments are adduced to emphasise that in planning our industrial system to maintain employment rates which would be necessary to carry our economic civilisation to a state where no substantial part of the vast manpower and material wealth of the country may go to waste would imply our choosing between technical progress and employment for our population. Obviously we shall be called upon in the future to attempt the impossible feat of balancing the one with the other, and such an economic evolution cannot be implemented without creating a certain degree of wastage of both manpower as well as material resources. Full employment for backward zones, as for metropolitan zones, does not mean that unemployment of manpower or of material resources can be completely eradicated; it will only remain as the vanishing horizon of all economic reconstruction which nations will always strive to achieve—as the target to which all schemes of economic rehabilitation are to be adjusted in order to reduce the vast zones of economic distress which are today prevailing and contaminating the economic life of every country in the world.

Necessarily, we cannot pretend to construct an industrial system which will incorporate within itself all the traits of an economically perfectly balanced industrial structure. In the less advanced countries of the world like India, industrialisation can only be conceived as auxiliary to schemes of agricultural rehabilitation and as means to the more 'economic' diffusion of employment pressures on the regional structure of occupations. Naturally the main emphasis on industrial reconstruction in our country will have to be, not so much on the technical efficiency of the industrial system, as on the capacity of the industrial system to balance the regional occupational system by absorbing the labour force that would be released from agriculture and adjust its production schedules to the manufacture of industrial goods which would be fundamentally necessary to maintain a determined pattern of regional living standards. In such a context, the industrial system would only become an integral part of the regional economic system which would be set up to sustain given patterns of regional standards of life.

### **Limits to Heavy Industrialisation**

In this sense, neither the industrial system, nor the processes of agricultural production, nor regional standards and patterns of living can be said to reach the standards of efficiency of advanced countries in production or the standards of living obtaining in the progressive zones of the world like America and Britain. It is only thus that the

problem of economic distress that today haunts the high population pressure zones like India can be solved, even though it may mean drastic reduction of the aggregate velocity of foreign trade for the metropolitan powers of the world and the ultimate control of the processes of technical advance and adjustment of the rhythm of production processes in the advanced countries of the world to the intensity of effective demand for their manufactures in the less advanced zones of the world.

It is needless to urge, at this stage, that there can be neither technical progress nor economic advance without drastic reconstruction of the standards of living in the so-called backward tracts which command eighty per cent of the total population of the world. India alone has over twenty per cent of the world's population. No world progress can be built on the economic distress of the huge population of the backward zones, and the present crisis in the economic evolution of the advanced countries of the world like America and Britain definitely points to the inescapable conclusion that neither British and American production, nor their standards of living, can be balanced without a substantial increase in the living standards of the people of the backward zones of the world to which India is privileged to belong today.

The foregoing observations emphasise certain main considerations in industrial planning for our country if we are to reach higher living

standards for the population: (a) that we cannot reach high degree technical efficiency in our industrial structure without reducing its capacity to balance population pressures; (b) that the larger industrial units having all the "economics of scale" will not solve our problems of population pressure and that the size of industrial units must be balanced with the capacity of specific industries to absorb specific employment pressures; (c) that industrialisation will have to be regionalised and industrial production schedules adjusted to the composition of regional markets for industrial goods; (d) that the greater part of the industrial system that we might plan should be decentralised and the industrial units dispersed over the entire country; (e) that the degree of industrialisation should be adjusted to the degree of population pressures in the different regions of the country; (f) that the existing industrial system should be so regulated as not to impinge upon the zones of influence of the new industries that are planned; (g) that 'special industries' should be set up and their location carefully planned with reference to raw materials and their production schedules adjusted to maintain essential volume of export trade to balance the normal imports that would be necessary for the smooth working of the economic system and for maintaining long term adjustment of exports to pay for the imports of capital and consumption goods to implement our schemes of economic reconstruction and rehabilitation.

A balanced structure of occupations for the country would imply at least the employment of

50 million people in the industrial system of the country and would mean the reconstruction of the industrial system of the country to sustain the standards of living of 200 million people on the wage structure of fifty million labourers. The task would almost sound stupendous when we realise that the industrial system that we plan to reconstruct will have to absorb a labour force which is larger than the entire population of British today, and twenty-five times the labour that is today absorbed in all the organised industries of the country. Nor can we assert that this much of shifting of population from agriculture would bring about any phenomenal transformation in the processes of agricultural production, as it will only mean shifting of only 50 million people from agriculture to industry against a present total of 158 million people (1941) on agricultural resources, still leaving 108 millions on the land resources as against 121 millions in agriculture in 1931. Naturally, unless we plan to absorb at least an additional fifty million in the industrial system of the country and provide for at least forty million people in the 'auxiliary occupations' like public administration, transport, servicing of industrial and transport equipment, banking and insurance, the essential social services like education, maintenance of public health and efficiency, seasonal construction services like the laying out of roads and major constructional projects, leaving within the next ten years only less than 50 million actual workers on the land resources of the country, we shall not be able to balance employment pressures in agriculture and

no lasting reconstruction of our agriculture is possible. And it is needless to add that no pattern of economic advance for our country can be sustained, if our agriculture cannot be reconstructed to provide cheap food for our population and cheap raw materials for our industries.

### Planning of Industries

When we take stock of the existing industrial resources of the country with a view to reconstruct the industrial system to withstand the employment pressure of fifty million people, we shall be able to appreciate the magnitude of the task that we are attempting to perform. Our mineral resources are meagre. The maximum output of iron ore for the entire country was 1·3 million tons in 1938, giving a per capita distribution of less than 8 lbs of iron ore per annum, with a distribution of iron production among Bihar and Central Provinces for British India, Eastern Agency States and Mysore, among the Indian States. Next in the order of volume of production came manganese ore with the metal distributed among Madras, Bombay, Bihar and the Central Provinces. In point of labour absorption, production of salt employed the largest number of labourers, with manganese mines coming next, followed by mica mining and mining of gold, all the mines in the country having less than half a million of labourers.

Naturally, if we are to reach our targets in employment pressures with a diversified industrial

structure, we cannot long maintain employment targets without depending upon imports of minerals and raw materials for the industries that we start in the metal and engineering groups of industries. In India today, the production of copper, for instance, which is an essential industrial metal, will not sustain the vast hydro-electric and power industries alone that we plan to build up. The production of copper for the entire country was hardly even 300 thousand tons in 1938, only two regions of country possessing copper resources, Bihar in British India and Mysore among the native states and employing less than 3000 workers. Such paucity of mineral resources and power for industries and transport would undoubtedly shift heavy employment pressures on 'essential' industries like the textile industry, food industries like oil mills, sugar mills, manufacture of confectionary, and auxiliary industries like general engineering industries and special regional industries like glass and paper, if we are to restrict our study to the industrial system of today. We shall have to absorb the fifty million actual workers that we plan to employ in new industries that we may start and depend upon the new industries that will emerge, with the implementation of the power projects that are to be promulgated and the industrial communities that will spring up in the neighbourhood of river valley and river zone development regions and the stimulus that would be given to old industries like boat building, lumbering, furniture making, coach building and the industries which would be set up to conserve and develop the forest resources in the forest



zones of the country, to absorb the greater portion of the labour force which would be demobilised from the land resources.

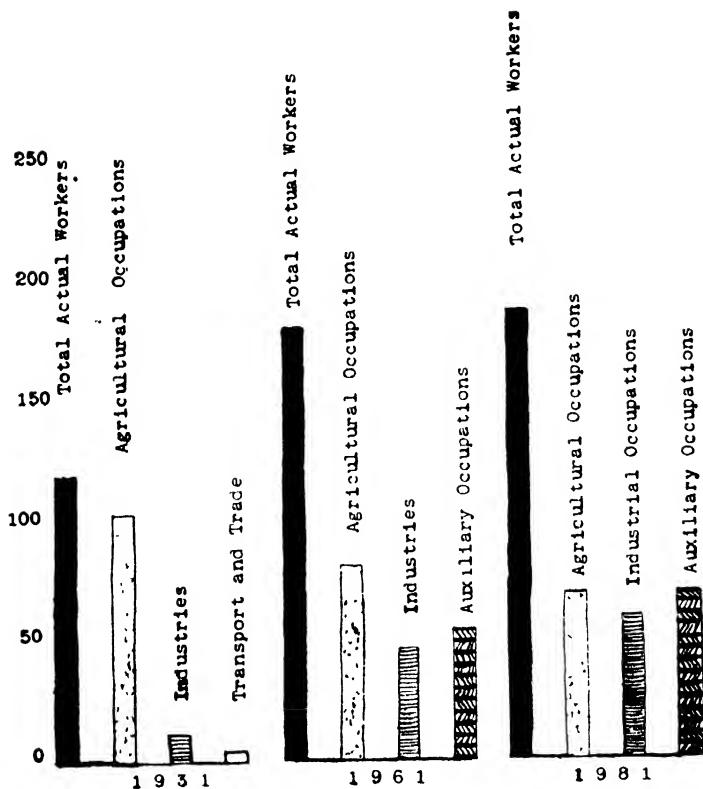
Undoubtedly, of all the sectors of the industrial system, the textile industry will offer the greatest opportunities for decentralisation and diffusion, to maintain some part of the vast labour force that would be released from agriculture. Particularly the cotton textile industry can be decentralised and dispersed among the rural regions with comparative ease, in view of the fact that cotton is grown practically all over the subcontinent. Similarly silk industry also can be decentralised and dispersed over the rural zones of the country. Other industries which can be subjected to an intensive process of decentralisation and dispersion are: wollen industry, woodwork, electrical engineering, general engineering, metal works, bakery and confectionary, dairy industry, fruit canning industry, sugar industry, tobacco industry, match industry, soap industry, bricks and tiles industry, glass industry, leather industry, and paper industry, as all these industries are at present existing in almost all the provinces of the Indian Dominion. Of the new industries that can be started, we can mention: ivory carving, toys industry, manufacture of perfumes, watch and clock industry, rubber industries, forest industries, plastics and clay industry, basket and bamboo industry, jute industry, which can all be split up into small units and dispersed over rural zones with regionalisation of industrial markets in the case of the 'essential' industries and development of inter-regional and

# OCCUPATIONAL STRUCTURE FOR

## INDIA

FROM 1931 TO 1981

(In Millions)





international markets in the case of special industries.

The reconstruction of the occupational structure will have to distribute total estimated working population of nearly 200 millions in the manner set out in the table below if we are to keep up rising standards of living for the population the country to reach balance in economic evolution by about 1981.

### Distribution of Working Population

(1931 to 1981)

	Percentage			Actual workers in millions.		
	1931	1961	1981	1931	1961	1981
Agriculture	86	45	35	103	81	70
Industries	11	25	30	13	45	60
Transport and Trade and Public Administration including Recons- truction projects	3	30	35	4	54	70
Total	100	100	100	120	180	200

These are the targets that we would have to reach by 1981, if we are to attain any sort of balance in our economic evolution. These targets are not visionary: France has been able to maintain such a balance with 38 per cent of the population in agriculture and mining, 32 per cent in manufacturing industries and 30 per cent in the auxiliary and administrative occupations in 1930. Similarly Germany was maintaining 33 per cent in primary occupations, 36 per cent in industries, 31 per cent in the other occupations. Among other countries which have maintained balance in occupations can be mentioned Italy, Japan, Sweden, Canada, Norway, Denmark, while countries with an overwhelming emphasis on industrialisation are the United Kingdom, the United States of America, Belgium, Netherlands, Switzerland, Czechoslovakia, and even in the most industrial countries of the world like Britain and the U. S. A. the industrial population was only 32 per cent and 30 per cent respectively, the country with about the maximum percentage of population engaged in manufacturing industries being Switzerland with 45 per cent of the population in the secondary industries.

### Regional Plans

These broad trends in the planning of the industrial development of the country are to be modified in relation to the peculiar regional economic conjuncture and problems of balancing of the occupational system in each region. The heavier the pressure of population in a given region, the smaller the industrial unit in each

industry will have to be, and the greater the area of dispersion of industries to increase the labour absorption capacity of the industrial system and to diffuse population pressures on the agricultural occupations. Thus the number of industrial units, the range of dispersion of industries, the size of the industrial unit will have to be closely related to the population density of each region, the higher the density of population, the larger will have to be the number of industrial units, the greater the area of dispersion of industries and the smaller the size of each industrial unit, to keep up maximum rate of labour absorption and the minimum rate of capital absorption by the industrial system. Broadly speaking small, efficient, light industrial units covering practically the entire range of industrial and agricultural consumption will have to be dispersed over the widest area ranging in size from industrial units absorbing fifty labourers to two hundred and fifty labourers in the following "high pressure" zones of our subcontinent: Bengal which had, in 1931, a mean population density of 646 per square mile, Bihar and Orissa with 454 per square mile, Madras with 328 per square mile, United Provinces with 456 per square mile, among the major provinces and Cochin State, Travancore with 814 and 668 respectively, Mysore and the States of the United Provinces with 224 and 203 per square mile respectively with the Indian State of Baroda which had 285 per square mile. These specific zones of the subcontinent will have to be subjected to an intensive process of industrialisation through the starting and dispersion of light consumer and

special regional industries which shall drain away the volume of population in excess of about 80 per square mile to the industrial occupations.

Such a readjustment of population density would mean the building up of economic holdings of at least 8 acres per agricultural population and the balancing of the rest of the population through the development of innumerable small urban centres or miniature industrial towns scattered over the rural areas of the country. To reduce the plan to concrete terms every ten square miles will have to support 800 people on land resources and balance the rest (of the 1950 people, taking the average mean density for the country at 195 per square mile) consisting of 1150 people with the industrial and auxiliary occupations in small townships spread out over the entire rural area of the subcontinent. In such a context, the problem of balancing of population pressures for the high density zones enumerated above would necessarily imply larger degree of 'urbanisation of the rural zones (in the five provinces considered above,) with greater degree of industrialisation supported by small industrial units to maximise labour absorption and to diversify the auxiliary occupational structure to balance employment pressures. Wider urbanisation of these zones would undoubtedly absorb greater blocs of labour in transport, general engineering and constructional industries and public, municipal and health services, in professions like the legal and educational, and with wider dispersion of urban units, the problem of balancing employment pressures can be effectively solved.

## Densely Populated Provinces

These observations would imply that the problem of economic development of Bengal, United Provinces, Bihar and Madras and the Southern Indian States with Baroda in the north can only be solved through greater propagation of decentralised industries and the development of wider urbanisation of the rural regions. Obviously, these provinces will have to be subjected to a more intensified programme of industrial as well as urban decentralisation and dispersion than the other provinces of the Dominion like Bombay, Assam, Ajmer, Merwara, Central Provinces and the Punjab, where greater centralisation of industry as well as urban development can be planned. Strange though it may sound, it is these high density provinces which have seen greater urbanisation of the centralised type, which has been one of the factors that have given our subcontinent an unbalanced economic structure. The development of centralised urbanisation in these high density zones is clearly symptomatic of the degree of economic pressure exerted on the rural standards of life by abnormal population pressures on agricultural occupations which have had the effect of depressing wage level and providing, in the industries started in the urban centres of the provinces, with a regular stream of labour from the rural zones. Thus centralised urbanisation that we witness in provinces like Bengal, Madras, United Provinces and Bihar is raised on the economic distress of the rural zones of the provinces and the abundance of labour and low



wage, rates prevailing, have inflated industrial profits and widened the gulf between incomes in the higher strata of population and the masses of the provinces creating gross inequality of income with resultant sociological and psychological consequences. Naturally, these provinces have been industrially most exploited today by capitalists immigrants from the other parts of the subcontinent and we find greater concentration of capital in these provinces than in all the other provinces with the exception of Bombay city and Ahmedabad in the province of Bombay. Thus with regard to average population per town, in 1931, among the major provinces of the country, Bengal stood first with 26,506, Bihar had 21,203, Madras had 18, 639 and the United Provinces had 12,300·7 thus demonstrating the degree of centralised urbanisation achieved by these provinces. From 1931 to 1941, the maximum variation was recorded by Calcutta with an increase of 79 per cent, Lucknow had a greater degree of variation, than even Bombay (28 per cent) with 39 per cent, Cawnpore, registered 99 percent of increase in population, Allahabad had 45 per cent of increase, all these towns with the exception of Calcutta, being in the United Provinces, while the development of Bangalore, Salem, Tinnevelley and Madura in the Madras Province has been over cent per cent in the fifty years from 1881.

These trends in the development of centralised type of urbanisation will have to be reversed if we are to maintain any adequate degree of economic progress, as further intensification of these trends

would be disastrous for the economic stability of these provinces whose problems of economic rehabilitation have already been enormously complicated by their abnormal population densities. The population released by high pressure on agricultural occupations in these provinces have given rise to centralised urbanisation of the metropolitan type seen in the countries of Western Europe and America, with all the major problems of urbanisation like housing problems, the emergence of slum areas as demonstrated by the chawl, the cheri and the basties that defy all the elementary principles of human sanitation that we see in cities like Calcutta, Madras, Madura, Cawnpore, and Jubbulpore, problems of social hygiene and, more urgent than all, problems of human relationship, let alone of labour security and welfare. The problems are so intense that no urban centre has succeeded in stabilising its labour market, in spite of the fact that the urban labour market in India is the creation of economic distress in the rural regions of the subcontinent.

Higher standards of living for the population of our subcontinent cannot, clearly, be reached through these wide avenues of lopsided economic development. None of the provinces mentioned above can pretend to reach any pattern of economic stability through centralised type of urban evolution which has so far been the creation of rural distress. And it is needless to say that, with the restoration of occupational balance in the rural zones of these provinces under the promulgation of schemes for decentralised industrial development

combined with widened dispersion of urban units in the rural zones, the main source of labour supply in the greater urban centres of the provinces will automatically dry up and the existing labour population which has till now been "pushed" to these centres by sheer economic pressure will return to their rural homes, leaving the industries in cities like Calcutta, Cawnpore, Lucknow, Madras and Madura to 'automatise' themselves as best as they can.

Any planning of future industrial evolution of the subcontinent cannot ignore these fundamental regional economic "complexes". While the future economic evolution for the provinces of Bengal, Bihar and Orissa, Madras and the United Provinces would give wider urbanisation with smaller industrial units and greater development of urban and industrial services with better balancing of population in trade and commerce, provinces like Bombay, the Central Provinces and Assam can have fewer but more centralised urban areas with medium-sized industrial units having labour absorption capacity of 1000 to 5000 labourers per industrial unit and with longer routes of transport as compared with the former group of provinces with better development of inter-regional trade and economic relationship.

It should be obvious that greater development of power resources particularly of electric power will have to be planned in the high pressure provinces like Bengal, Madras, Bihar and the United Provinces along with greater circumscription of

the industrial markets and a wider network of 'mobile' transport like automobile transport with greater development of roadways and waterways. In the new economic setup, these provinces will have to build up their agricultural and industrial production to greater levels of export to balance the heavy imports that would be necessary for their industrial system and for the consumption of the populations in the urban centres of the provinces that would be necessary for the provinces with lesser density of population. In such a context, special regional industries to sustain the volume of exports necessary to pay for imports would have to be planned for these provinces with special reference to raw materials and traditional skill available in each region. In Bengal, fishing, paper industry, electrical industries, chemicals and pharmaceutical industries, silk industry, perfume industry, toy-manufactures, jute weaving industry carpet industry and metal industry can be developed as special industries for the development of inter-regional and international trade. New industries, particularly in the 'twentieth century' goods of general consumption, can also be developed. In Bihar, general engineering industries, metal industries, silk industry, confectionary industry, soap industry, stone dressing industry, chemical industry, soap industry, paper industry, pottery and glass ware industry, leather and shoe industry, metal works, machine tools industry, and silver and gold thread industries, manufacture of furniture and toys can all be developed as special regional industries. In Madras, the tobacco industry, silk industry, chemicals industry

lac and match industries, heavy chemical industry, paper industry, bricks and tiles industry, leather industry, rubber industry can be planned as special industries.

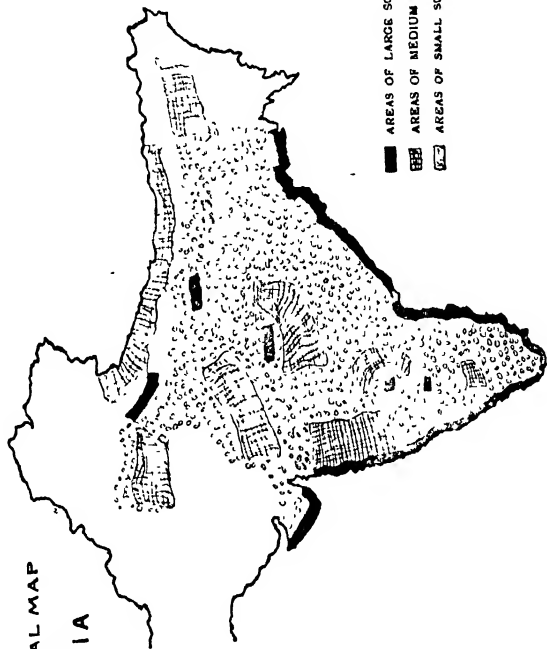
### Spreading out of Industries

It is not possible to lay down zonal or regional targets for industrial development in view of the varying magnitude of problems of regional adjustment of population pressures and sociological and agricultural inhibitions. Necessarily we have to content ourselves with the statement of the general principles which should govern the mapping out of lines of future industrial advance of the various broad zones of the country.

It should be clear that heavy population pressure zones cannot solve their economic problems without intensive decentralisation and diffusion of industries to raise the industrial structure to the level of dissolving pockets of occupational stagnation that exist in each region of our country. There are two significant considerations that cannot be ignored in planning future development of the industrial system: (a) that the industrial system should absorb the least degree of capital resources of the country in view of the enormous difficulties in the building up of exports to pay for the import of capital from the other countries of the world; and it should have the maximum degree of labour absorption to maintain balance in the occupational structure without which no higher living standards for the heavy population



# INDUSTRIAL MAP OF INDIA



■ AREAS OF LARGE SCALE INDUSTRY  
▨ AREAS OF MEDIUM SCALE INDUSTRY  
● AREAS OF SMALL SCALE INDUSTRY

regions of the country can be reached. This fundamental scheme of adjustment would necessarily imply reduction in the size of the industrial units, their diffusion over the rural areas to avoid the cost of industrial urbanisation and the gradual breaking up of the social and cultural inhibitions of the major sections of the rural population by providing the scope for greater mobility of labour among occupations, (b) that the acute problems of labour shortage that would arise in the existing industrial centres should be solved by high degree technical reconstruction of the industrial structure and the circumscription of capital imported from abroad to the development and reconstruction of the older sections of the industrial system to build up the exports necessary to sustain capital movements from abroad with complete insulation of the reconstructed industries of the large scale type with heavier capital structure from the internal markets for industrial goods to prevent adverse effects on the industrial structure of the rural zones of the subcontinent.

### Three-Panelled Industrial Plan

Such a development would give us three major sections of the industrial system of the future: (a) the primary section or the base of the industrial system with small, modernised, efficient industries with the maximum degree of self-sufficiency in capital equipment and maximum degree of labour absorption with their production schedules adjusted to regional intensities of effective demand for industrial products, confined



specially to high population pressure regions of the country, like Bengal, the U.P., Bihar, Madras, (b) the secondary section, comprising of larger industrial units with greater degree of technical advance in regions of lesser population pressures as in Bombay, the Central Provinces and Assam, with some of the Indian States in the neighbourhood, with development of zonal markets for industrial goods and with capital structure largely self sufficient, employing from 500 to 1000 labourers per industrial unit and with greater urban development than in the first group; (c) the tertiary section of the industrial structure in the older industrial centres like Bombay, Calcutta, Madras, Cawnpore, Ahmedabad and other existing industrial urban centres with large-scale industrial units with up-to-date technical advance and international standards of productive efficiency, employing capital and technical skill imported from abroad and with the minimum degree of labour absorption, with specially adjusted production schedules to maintain exports to pay for the capital imports and imports of industrial consumption goods necessary to maintain higher living standards. Some industrial units in these centres will have to be reconstructed and new industries will have to be started to manufacture the capital units in the rural areas of the country and also to manufacture the transport and constructional goods for the wider development of the other parts of the zone in which they are located. This would mean that the tertiary section of the industrial system would consist of two major strata: (a) large scale industries tuned up to international

standards of technical efficiency to build up exports with their capital structure sustained through foreign imports of capital equipment and technical skill, (b) the capital goods manufacturing section devoted to the fabrication of industrial plant for the decentralised industries of the country and for the manufacture of the transport and constructional goods for zonal consumption. These industries must be planned to have the minimum degree of labour absorption in view of the gross instability of the urban labour markets, which would be steepened with the development of decentralised industry and to maintain a regular stream of cheap capital goods for the development of industries in the rural regions of each zone.

### Primary Section

Thus according to the census of 1941, the areas of heavy density and consequently of the primary section of the industrial structure described above will be as shown below for the different provinces. Heavy decentralisation of industry and dispersion of small industrial units will have to be planned for Vizagapatam, Godavari West, Kistna, Chingleput, North Arcot, Salem, South Arcot, Tanjore, Trichinopoly, Ramnad, Tinnevelley, Malabar zones in the Madras Province. In Bombay Province, Karia and Surat, will have to have high degree of decentralisation of industrial development. In West Bengal, decentralisation of industry would have to be planned for the entire province. In the United Provinces, decentralisation will have to be planned for all regions

with the exception of Dehra Dun, Pilbhit, Jalaun, Hamirpur, and Banda, Mirzapur, Kumaon and Kheri. In East Punjab decentralisation would be necessary for the regions comprising of Rohtak, Ambala, Simla, Amritsar and Gurdaspur. In Bihar, decentralisation of industry will have to be universal except for Chota Nagpur division, the only part of Chotanagpur which will have to be brought under the general list being Manbhum. Orissa will have to have small industries in Cuttack, Balasore and Puri regions. These are regions with a density of population of over four hundred per square mile according to the census of 1941, and cannot pretend to have even medium sized industrial units if they are to balance their population pressures on their regional resources. In these parts, very small industrial units worked by high precision machines, run with electric power and employing between five and fifty labourers per industrial unit, will have to be planned. Such an industrial development alone can absorb population pressures and, with the growth of decentralised industrial system, the auxiliary services would absorb quite an equal 'bloc' of regional population leaving the rest of the population on the land resources of each region. Thus if we plan to leave only 80 persons per square mile on the land resources of the country, more than 200 persons per square mile will have to be sustained by industrial occupation and about 200 or more will have to be absorbed by the auxiliary services like the transport system, general and special engineering services, municipal services, educational services, public health, trade and commerce,

power transmission, banking and finance, to mention a few of the occupations that would grow with the greater spread of decentralised industries in the rural regions.

### City Industries

Necessarily with the greater spread of industrial decentralisation heavy and large scale industries will have to be developed in the existing larger urban centres of the country, particularly in cities with a population of a lac or more. Such a development can be planned in Madras province in the cities of Madras, Madura, Trichinopoly, Coimbatore, Salem and Calicut; in Bombay Province, for the cities of Bombay, Ahmedabad, Poona, Sholapur, and Surat; in Bengal for the cities of Calcutta, Howrah and Bhatpara; in the United Provinces for the cities of Cawnpore, Lucknow, Agra, Benares, Allahabad, Bareilly, Moradabad, Meerut, Koil, Aligarh, Shahjanpur and Saharanpur; in Bihar for Patna, Jamshedpur and Gaya; in the Central Provinces for Nagpur and Jubbulpore; to give some of the important centres of the country where large scale industries can be planned as centres of capital goods industries for the regions concerned and for the development of large scale industries with modern equipment and capital structure for the production of goods for export in order to balance our imports of capital and consumption goods from abroad. There can be no arbitrary determination of the trend of urban development in future, particularly with reference to the centres mentioned above;

but one can easily predict the enormous industrial development of the existing urban centres on the west coast of the country and the coastal strip in the east of our subcontinent rather than in the interior parts of the country.

Heavy industrialisation from this point of view, with upto-date methods of technical advance would have to confine itself to the Bombay province North and South Canara, and Malabar on the West Coast, the Madras province and Bengal on the East coast, as heavy industrialisation will have to be sustained more by foreign trade than by internal trade and will have to employ foreign technical skill with its location planned to minimise heavy costs of transport either of raw materials or of finished goods or of industrial power. Naturally from the standpoint of all these factors, greater degree of industrial urbanisation can be expected on the west coast regions than on the east coast, in view of the potential power resources that can be developed in the western Ghat zone of the country in the years to come with the harnessing of all available sources of hydro-electric power, while the east coast regions have to depend on either costlier sources of electric supply or on the oil resources of Burma.

### **Economic and Technical Problems**

With the intensive decentralisation and dispersion of the industrial structure of the country, the problem of maintaining regular stream of labour supply in the existing larger industrial

centres of the country will assume enormous proportions and the contact between the rural areas and larger urban centres would be snapped. This would undoubtedly dissolve the major problems of labour welfare in the larger industrial centres, except the portion of labour which would be employed in the primary strata of urban transport, municipal, health and other auxiliary metropolitan services and would render mechanisation and 'automatisation' of metropolitan centres easy. Greater technical development to get round the problem of labour shortage would become inexorable along with a greater degree of isolation of larger urban centres from the main springs of economic evolution in the other parts of the sub-continent, since industrial development of the larger urban areas would be planned either for export markets or for the manufacture of capital goods for the decentralised industrial system of the country. Such an evolution of the larger urban centres of the country would not only mean planning future development of big cities on lines of urban evolution in cities like London and New York with all the essential features of twentieth century developments in metropolitan comfort and designs for living, but also the incorporation of the most up-to-date automatic processes of production in the industries to keep their competitive capacity tuned to international standards of technical and economic efficiency.

Decentralisation and dispersion of the industrial system together with sterilisation of the main industrial structure of the country from the giant

industries of the metropolitan centres would not only guard the decentralised part of the industrial system against violent industrial and financial cycles, but also ensure the decentralised units all the benefits of technical advance, so far as the capital goods necessary for maintaining the main industrial system of the country are concerned. Such an evolution of the economic system, where economic progress is compartmentalised and every strata of world economic evolution is reproduced and properly insulated against each other part of the economic system, would enable our country to have the maximum benefit from world progress in industrial and agricultural technology with the minimum degree of the instabilities inherent in all economic systems with high degree technical advance. It would also speed up the process of economic evolution by enabling the country to reach higher levels of economic self-sufficiency sooner than if we had planned our economic development along the highways of industrialisation with international standards of technical and competitive efficiency and development of foreign trade to keep up our industrial system.

Decentralisation and dispersion of the industrial system does not mean complete isolation of our economic system from any kind of world economic relations. The economic development of our country cannot be efficiently implemented without international economic as well as technical cooperation. Nor can we pretend to have the economic strength to withstand the force of the impact of cyclical fluctuations in economic activity

which are created either by the instabilities of technical progress or by the abnormal tendencies appearing periodically in the money markets of the world. We shall have to guard our economic system from the impact of major economic instabilities, that are inevitable in world economic evolution when the processes of economic adjustment reach a period of transition at each halt in the march towards prosperity and plenty, creating waves of progress and depression in other parts of the world.

Our industrial system will have to be planned with a view to maximise the benefits of world progress in industrial as well as agricultural technology and minimise the impact of world economic instabilities which are created at each stage of transition in the process of economic evolution of the countries, with which we shall have to maintain economic relationships. The three panelled structure of industrial evolution outlined above, would give us an industrial system which shall have the power, not only to ensure international standards of economic efficiency in our industrial system, but also a reasonable degree of economic stability which is so essential to maintain a balanced structure of employment pressures, without which we would not be able to reach higher living standards for the vast population of our subcontinent.

### **Large Industries**

The large scale industries that would be developed in the existing metropolitan centres of



our country, with all the advantages of the most up-to-date technical advance and industrial research, with high degree "automatisation" of all processes of industrial production, would act like the economic Maginot lines for the entire economic system of the country. These industries would enable us (a) to maintain and build up export trade with other countries to pay for the heavy import of capital and consumption goods that we get from the more advanced countries of the world, to implement our schemes of industrial decentralisation and dispersion of industrial units; (b) to maintain a regular supply of capital goods that would be needed by the primary and secondary sections of the industrial system in the rural regions, so as to make the country progressively self sufficient with regard to its technical equipment; (c) to withstand any attempt at dumping of foreign goods which might destroy the stability of our industries in rural areas, by offering fierce competition whenever necessary; (d) to stand as the guardian of the entire economic system of the country with high degree technical advance and maximised competitive power which are developed to international standards of efficiency; (e) to keep up the contours of our foreign trade which is essential to implement higher standards of living for the entire population and adjust themselves to the changes that may occur in the industrial as well as agricultural markets of the world.

These industries naturally will have to be planned in those lines of industrial production

where international competition may be expected to develop furiously in the years to come. It is difficult indeed to forecast the intensity of international competition and the lines of production in which that competition would develop in view of the major uncertainty of technical advance in the world of tomorrow. With the existing data that we possess, we can surmise that heavy competition will develop in the textile groups, in the machine tool industries and in those industries which can be called "twentieth century" industries like electrical consumption goods, like bulbs, fans, electric heaters, radio sets, washing and drying machines, cycles and motor cycles, automobiles, television sets, type-writers and dictaphones, telephone equipment, high grade glassware, high grade paper products and stationary, and household service gadgets, and small electric motors. These are industries which would, for a long time, remain complementary to the economic evolution of our country and the large scale industries that we build up in the larger urban centres of the country need not be planned to produce these articles, since greater development of the industries in rural areas with general rise in standards of living would absorb heavy imports of these "twentieth century" goods without upsetting the production schedules of the decentralised industry in rural areas. The larger industries will have to adjust their production schedules to fight dumping of goods which might damage our greater industrialisation programmes and develop markets abroad. This would limit large scale industrial development to the production of high grade

textiles for consumption abroad, including other consumption goods for purposes of consumption in other countries like high quality cotton piece goods, woollen and silk goods, cheaper quality glass and metal ware, chemicals and perfumes, machinery and machine tools for internal consumption, heavy chemicals for agriculture, agricultural implements, transport equipment like wagons and coaches for the railways, coach building for automobile transport, manufacture of cranes and pulleys, wires and ropes, iron and steel furniture and articles of general household and industrial equipment like pumps, simple power plants, cheaper rubber goods for industry like cycle tyres, motor tyres and insulating equipment, basic electric equipment like bulbs and fans, manufacture of simple transport equipment like rolling stock on tramways and narrow gauge engines and rails, pipes and plumbing equipment, smaller types of tractors and harvesting machines, to give a few on the vast list of articles, production of which can be planned for the internal market for industrial goods.

### Medium Industries

The medium scale industries that are to be started in the regions of the country, with lesser population pressure than the regions of large scale industry, will have to be planned for a market wider than the market for the primary sector of the industrial system but 'rarely transcending the geographical limits of the Dominion. Necessarily, a large section of the medium scale industries

will have to be confined to the production of industrial goods which shall have "special" market in the other regions, like finer grades and varieties of cotton, woollen and silk textiles, manufacture of jute, cotton and woollen carpets, finer grades of metal products, finer grades of glass and steel products like bottles, fancy domestic glass-ware, jars, iron and steel furniture, canned fruits and confectionary, 'special' regional raw material preparation industries, like jute products, plantation industries as in the case of tea, coffee, rubber and the finer varieties of spices, indigenous pharmaceutical products, manufacture of finer grades of soaps and oils, perfumery products, finer grades of bricks and tiles, finer types of granite and marble work, plastic products, manufacture of finer grades of vegetable oils as for instance, in the cocoanut zones of the subcontinent on the coastal regions, wooden and cane furniture of finer grades, hosiery of the finer varieties, medium sized engineering products and any other industrial products whose markets are complementary and not competitive to the industrial markets for the primary sector of the decentralised industrial structure in the rural zones of the country.

In the case of tertiary and secondary sectors of the industrial system, undoubtedly the ratio of auxiliary equipment in the occupational structure would be greater than in the case of the primary sector and there will have to be greater development of trading and commercial occupations, with wider spread of banking, financial, salemanship and advertising services, research services in

industrial technology, as the markets go on widening themselves. Necessarily this trend in the formation of the occupational system would balance the regional or zonal employment structure by absorbing greater volume of population in the servicing of the industry, particularly on the financial and marketing side, and in industrial research and compensate for the loss of labour absorption in the medium scale industries which shall have reached greater degree of mechanisation of the processes of manufacture than in the primary sector of the industrial system. The location of these industrial units will have to be planned specially in regions of medium population density from about 200 to 400 but below 400 per square mile specially in Bombay and the Central Provinces.

### **Primary or Small Industries**

The greatest vigilance and caution are required in the planning of the primary sector of the industrial system whose twin objectives of (a) maintaining balance in the structure of occupations in the rural zones; and (b) balancing the industrial units with regional markets and price-formations consistent with the formations of agricultural incomes, will necessitate the setting up of an industrial system which shall have the necessary flexibility to adjust itself to regional needs in industrial products as well as in the maintenance of employment rates and volumes in the industrial sectors of the regional occupational system. There can be little doubt that in the case of the primary

sector of the industrial system the degree of mechanisation that can be attained by the industrial units will have to be planned with reference to three fundamental factors: (a) employment rates and volumes to be maintained to relieve population pressures from agriculture (b) power resources of the region concerned: whether it be coal, oil or electricity; (c) the area of effective market for the industrial products of these units of industry with special reference to the income formations of the regional agricultural populations. These industries, naturally, will have to be content with lesser degree of technical advance than can be attained by the secondary and tertiary sectors of the industrial structure of the country, but adequate enough to balance the cost of production for industrial goods with the price movements in the local markets for industrial consumption goods

Seen from this angle, the size of the industrial units in the primary sector, must necessarily be adjusted to maintain employment rates and volumes in industry as well as to serve the degree of mechanisation necessary to keep down the costs of production in order to maintain an "effective" area of the market for industrial goods in the agrarian tracts. If greater mechanisation is necessary to manage cost formations, it is essential that the industrial units must be of small size and dispersed over a wider area to keep up employment rates in industrial occupations. Thus specially in very heavy population pressure regions of the country like Bengal, the industrial units will have to be so small that they would be little

more than mechanised cottage industries employing between five to fifty labourers as in some of the heavily populated areas of Japan. We learn that in Japan in 1930, 53 per cent of the industrial population worked in 'factories' which employed less than five persons. Similarly 23 per cent of industrial population in wollen textiles, 66 per cent in silk textiles, 45 per cent in hosiery, 57 per cent in porcelain, 35 per cent in electric lamps, 58 per cent in bicycles, were engaged in industrial units employing less than five persons. (Industrialisation and foreign trade, League of Nations, 1945, pp 51-52) Such a heavy decentralisation and dispersion of industrial units would undoubtedly maintain not only employment rates in industry which are essential to sustain a balanced regional occupational structure but also keep down costs of production since the capital needs of industrial units would be small, besides developing auxiliary occupations like the servicing of industrial plant like for instance, general engineering, electrical engineering and mechanical engineering services which would absorb an appreciable volume of population to counteract the dynamics of employment absorption rates in mechanised industrial units. Sales and advertising services together with research services would develop enormously with the greater and wider development of regional 'special' industries like ivory carving, furniture, toys, clay products, perfumery, fruit canning and essence industries, forest industries and crafts, industries connected with fine arts and crafts which would be developed in each rural zone of the country.

If we are to maintain the solidarity of the primary sector of the industrial system of the country, we shall have to circumscribe the area of the markets for industrial goods to the regions where the industries are situated except in the case of the 'special' industries which can be organised for a wider market. This would mean severe regulation of industrial markets and adjustment of production in the decentralised industrial units to the rate of consumption in regional markets for industrial goods. In such a scheme, production will have to be confined to articles of general consumption like 'standard' quality of textiles, food industries, 'standard' quality soaps, sugar and sugar industry bye-products, manufacture of household utensils, production of simple furniture for regional consumption, assembling and servicing of simple transport equipment like bicycles, and of simple machines like gramophones, sewing machines; general hoisery industrial products, dairy products like butter, powdered milk and ghee; leather goods for local consumption like sandals, harnessing equipment, belts and other goods of general everyday use, among the 'general' industries of the region. Every region will also have special industries like the major and minor forest industries, like lumbering and furniture, preparation of lac and lacquered works, honey and canning of fruits and fruit essences, oil crushing and ginning, silk and silk products, woollen products, plastics and pharmaceutical; curing and canning of fish; rope making and cocoanut and jute industries in the coastal and jute zones of the country, to mention a few of the

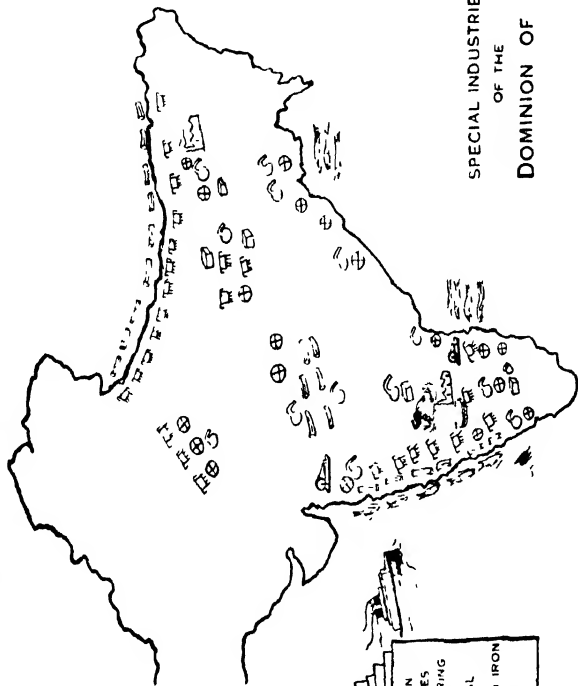


lines of industrial production that can be organised as general and special industries in the rural zones of the subcontinent.

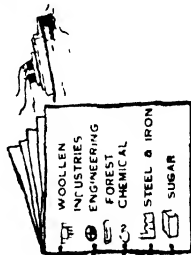
## Objectives of Industrial Planning

In the planning of these three important sectors of the industrial system of our country, it is essential to stress that we shall have to maintain balance in the entire structure through adjustment of industrial markets and allocation of labour force and different productive functions in such a way that no sector of the industrial system will compete with the other sectors and each industrial unit will have a special section of the national market for industrial goods to which it can adjust its production schedules unmolested by either internal consumption or by the flow of industrial goods from the other parts of the country, and without impairing either the technical efficiency of the industrial structure as a whole or its capacity to absorb labour force necessary to enable efficient reorganisation of agricultural production in the vast rural zones of our country. Such three-panelled structure of production with clear demarcation of marketing zones would preserve balance of industrial evolution in our country, the primary sector planned to keep up balance in occupational structure, the secondary sector with medium scale industries maintaining international economic relations necessary to sustain higher living standards for the regional populations and the tertiary sector with up-to-date technical im-

# REBUILDING INDIA



## SPECIAL INDUSTRIES OF THE DOMINION OF INDIA





provements in industrial production maintaining international structure of economic and cultural relations necessary to keep the economic system of our country attuned to international standards of economic progress, while keeping up an adequate flow of capital goods necessary to implement decentralisation and dispersal of industrial units in the rural zones of the country.

### Capital for Industries

The capital structure necessary to maintain the industrial system of the country would have to be adjusted to this three-panelled structure of industrial evolution. The tertiary sector of the industrial structure would need heavy imports of capital and intermediary goods from the other countries of the world and would necessarily imply the rebuilding of our export trade to balance heavy imports of capital goods that we need not only for the building up of tertiary sector of the industrial system of our country, but also for the enormous magnitude of our power development projects and the widened and diversified transport system that would be built up as auxiliary to the greater industrialisation of the rural zones. In this regard, the tertiary sector of the industrial system will have to be kept structurally as well as functionally flexible to keep up its efficiency to international standards of technical and economic processes of progress, and would undoubtedly mean periodical technical reconstruction involving mounting capital expenses, which the state alone

can have the capacity to withstand. Since the tertiary sector of the industrial system also acts as the first line of economic defence of the entire economic system of the subcontinent, it should not be allowed to be controlled by private financial houses or run with 'profit' as the incentive to production, and would make complete nationalisation of the industries of the tertiary sector imperative, along with the nationalisation of all transport system and power development projects. This would necessarily mean complete reorientation of public finance with a drastic change in the methods of budget making involving bounty and subsidy systems of industrial finance to which we shall turn in the final chapter of the present work.

The financing of the secondary and primary sectors of the industrial system can be left with private financial interests with certain regulations regarding price formations and control of profit rates to prevent undue expansion of particular industries and the overlapping of markets with the lop-sided development of inter-regional, inter-zonal and intra-zonal competition in industrial goods of the 'essential type' which would undoubtedly damage the occupational balance built up by decentralisation and dispersion schemes of industrial evolution. State regulation of (a) movements of goods between different regions and (b) labour movements between occupations will have to be planned to prevent abnormal changes in wages and prices, and will have to be implemented with schemes of (a) standardisation of real wages throughout the country (b) management

of price changes which may create undue movement of industrial products from one part of the country to another, except in regard to "special" industries of each region where state regulation may be reduced to mere taxation methods for control over production, which alone can prevent undue flow of productive resources into special industries of the region at the cost of the essential industries.

Necessarily in such a scheme of planning for greater industrialisation of the country, private enterprise can only confine itself to the primary and secondary sectors of the industrial system subject to regional or zonal or even central regulations necessary to prevent disintegration of the industrial system or the emergence of industrial and financial vested interests in the process of industrial rehabilitation of the country. State regulation will have to be directed towards securing ordered movements of goods between different economic regions and standardisation of price changes and wage rates to implement such a control of movements of men and material. Such a regulation of economic evolution cannot be centrally directed and will involve decentralisation of economic control with regionalisation of economic administration.

Regional control of industrial progress would have to be confined to the determination of the lines of regional production, the number of industrial units that are to be left in each line of industrial production, the size of each industrial unit and the total volume of production to be reached

by each industry to prevent overproduction in any line of industry, leaving financing and management of industrial units in the hands of private individuals.

Such an evolution of industrial finance and enterprise cannot be implemented without adequate control of the regional as well as national money market and complete reorientation of existing financial institutions to suit the plans of integral development of the economic resources of the country. Industrial finance, in the new context, cannot be sustained without the greater spread of savings bank movement with the circumscription of commercial banking and control of operations on the stock exchanges of the bigger urban centres in so far as the primary and secondary sectors of the industrial system are concerned. Nor can price stabilisation schemes be adequately sustained without control of the money markets both national as well as regional to prevent undue influences from manifesting themselves on the structure of regional price formations.

It is needless to add that in the new economic conjuncture, the role of private enterprise as well of industrial finance would be subordinate though the area of private enterprise seems to have been widened, in view of the regional and central regulations that would be necessary to prevent misdirection of regional productive resources. That happens to be the only way in which the industrial structure of the future can be balanced in the complicated scheme of regional economic relations

which would be necessary to maintain rising standards of living for the population of the country.

### Resume

In the economic setting in which the country is placed to-day, we cannot afford to expose the industrial system that we build to the violent swings of industrial cycles which would seriously damage the occupational system of the country by creating periods of over-activity and under-activity in economic evolution. Though a decentralised industrial system is relatively free from violent industrial fluctuation, if private investment in industry and the volume of production in each line of industry are not controlled, trade and industrial cycles may originate in the industrial system itself by lack of adjustment between the pace of production and the rate of consumption in the regional markets for industrial goods and finally sabotage the industrial structure itself from within leading to paralysation of the economic structure of the country.

Nor can it be denied that regulation of industrial system along the lines indicated would lead to stunted growth of the industrial units and also that any further extension of industrial occupations would only lead to diversification of the industrial system and that problems of balancing of the new sectors of industrial system would arise incessantly in economic evolution of the country in the days to come. These problems are indeed, unavoidable in



a growing economic civilisation with uncertainty in the dynamics of population and incessant change in world economic evolution ever present. Nor are the alternative courses of evolution less complicated and less involved with the limited knowledge that we possess today about the changes that may occur in the productive organisation of the future world, we shall have to plan for reasonable stability in economic evolution. This stability cannot be achieved without a concerted vigilance to guard the industrial system from forces of economic disintegration which may arise either from the side of industrial markets or from within the industrial units themselves.

Ultimately, the problem of industrialisation of our country is a problem of economic balancing of the occupational system to sustain higher living standards for the population. India is an old country with heavy population pressures which have to be sustained on an occupational structure which has not seen any kind of adjustment with twentieth century standards of living and patterns of progress. Our industrial system of the future must have all the best traits that are essential for survival in the twentieth century economic conjuncture. Such a readjustment cannot be achieved without incorporation of all the stages of world economic evolution in order to preserve employment rates necessary to transform the occupational structure of the country and to maintain conformity with international standards of technical as well as economic efficiency. We must plan to consolidate the occupational systems within the country

as well as to maintain an adequate structure of economic relations without which we cannot hope to survive in the economic civilisation of the world in future.

In this task four trends of future economic evolution are inevitable (a) growing sphere of state regulation of industrial as well agricultural production; (b) management of foreign trade to keep up world economic relations; (c) regulation of prices and wages to preserve regional economic systems from trade, a financial and employment cycles; (d) nationalisation of the tertiary sector of the industrial system together with nationalisation of the money market as well as of the transport and power systems of the country. All this would undoubtedly reduce all lines of production into public utility services with enormous institutional changes in the economic administrative patterns.

## BOOK IV

# ECONOMIC BALANCE AND RISING LIVING STANDARDS

### Higher Living Standards

That the economic problem of our country—the problem of raising our living standards and of maintaining those standards from falling—cannot be solved either by mere industrialisation schemes, or by schemes of agricultural reconstruction and rehabilitation or even by multi-purpose river development projects, is a proposition which cannot be seriously challenged. We have seen earlier in the course of the book how plans of economic advance are to be knit into an integral pattern of economic evolution, if our living standards are to be raised and maintained at higher levels, and also how the task of building up India's economic system to international standards of efficiency—both technical as well as economic—at the same ensuring adequate 'incomes' both in industry and in agriculture to sustain higher living standards for four hundred million people is the most difficult, specially when we have no knowledge of the trends of population growth of the country in future years or of the changes that may occur in other parts of the world in the organisation of industry and agriculture. It is inevitable

that plans of reconstruction of our industrial system as well as of our agricultural production will have to be pressed to maintain balance (a) firstly between the occupational system and the rate of growth of our population and (b) secondly between the rate of our economic progress and the intensity of economic evolution of the world in the years to come. Such a balance would imply a delicate structure of economic checks and adjustments, which would fundamentally change the very contours of economic institutions in our country with complete reorientation of social as well cultural institutions which have been crystallised in the civilisation process of our vast subcontinent.

Such a process of readjustment of all schemes of economic reconstruction in our country implies the planning of future economic evolution to maintain structural as well as functional balance in every department of economic life. This would mean that agriculture as well as industry must be reconstructed so as to allow room for incessant balancing of both with the growth of population on the one hand and the progress of agricultural and industrial technology in the other countries of the world on the other, if we are to keep our living standards adjusted to the changing data of international cultural and economic advance. Such an adjustment cannot permit our industry and agriculture to have set patterns of production and would make incessant shifts and changes in the methods as well as contours of agricultural and industrial production inevitable, if we are to

keep the country in the van of economic progress. Each change and adjustment that would be necessary to keep the economic system of the country adjusted to international trends in economic civilisation would undoubtedly upset whatever schemes that we may project to seek balance between the administration of our economic resources and the dynamics of our population.

The problem of living standards of our population, consequently is not a simple problem capable of solution by mere adjustment of agricultural and industrial production processes to incorporate twentieth century patterns of technical efficiency. It is, in fact, a problem immensely complicated, firstly, by the uncertainties of population growth in our country and, secondly, by the equally catastrophic uncertainties of the technical and economic progress of the world in future. We certainly cannot pretend to plan an economic evolution which would be completely independent of world economic evolution. India must seek fulfilment of her economic destiny in the uncertain patterns of international adjustment of progress and prosperity which may be planned in future. There can be little doubt that our structure of economic conservation to maintain higher living standards for the population of our country may easily be contaminated by waves of prosperity and distress that may originate in the other countries of the world through the mechanism of our external economic relations without which our programmes of economic reconstruction cannot long be sustained.

## **'Sustaining Force' and Economic Civilisation**

In such a setting, the problem of maintaining balance in our economic evolution assumes its proper dimensions. We may build up a decentralised and diversified industrial system and drive small, efficient, mechanised industrial units all over the rural zones; we might reconstruct our agriculture to reach international standards of technical efficiency; we might plan out gigantic projects for the utilisation of the vast river wealth and power resources that lie dormant in the variegated natural resources of our country; we might devise transport system that may knit the remotest village into a comprehensive transport system of the subcontinent; we might project all the auxiliary occupations necessary to sustain this complicated pattern of economic advance; and yet we may fail to solve the problem of progressive living standards for the vast population of the country and the entire fabric of material civilisation that we may build up may collapse in the absence of the integrating force, which alone can make the economic civilisation of a country move towards its goal of fulfilment. Without that sustaining 'force' which alone can move the wheels of economic civilisation, the most technically efficient economic civilisation might crumble in a bewildering maze of unadjusted ratios of economic advance, like a technically efficient industrial unit which is starved of the motive power which alone can galvanise the complicated machinery which forms the essential part of its technical equipment.

The sustaining 'force' which motivates all economic civilisations manifests itself through the accepted network of economic relations that exists in any given part of the world and builds up economic and governmental institutions which invest regional economic civilisations with a personality, which is peculiarly their own. The network of economic relations in any specific region will have to seek institutional expression through the sociological and cultural nexus and in this process of adjustment between economic 'forces' and sociological and cultural institutions, new economic institutions are modified and reorientated by the impact of economic relations at any point of time. Thus, regional civilisations which comprise of social and cultural institutions, no less than economic institutions, are structurally as well as functionally complicated, since they are created by the intricate processes of "balancing" in which the network of economic relations is but one of the factors; and economic institutions bear the impress of social and cultural relations even as social and cultural institutions are in part, the articulate manifestation of the regional 'economic' spirit.

It is thus alone that we can establish the relativity all economic as well as social and cultural institutions and the truth of the Marshallian dictum that every social change is likely to need a reorientation of economic doctrine even as every economic change is likely to require a new development of social doctrines. In view of these close and delicate interconnections between the economic and

sociological processes of evolution, any change in economic institutions is bound to create sociological repercussions, and in this clash between the economic and sociological data of progress, there can be little doubt that both economic and social institutions will have to undergo drastic transformation, changing the very contours of the regional civilisation which has to be adjusted to the new economic and social forces that have to be institutionalised.

### Careful Planning

Naturally, changes in economic institutions will have to be planned with a great deal of caution in any region. This factor would undoubtedly further complicate the problem of balancing economic evolution with sociological and cultural considerations in addition to the mere economic consequences of reconstruction programmes. This problem of balance in economic evolution becomes almost insurmountable for our country in view of the enormous complexity of what may be called 'exogenous forces' influencing the course of economic evolution and incessantly disturbing the pattern of 'balance' that we may attempt to reach in the building up of economic relations which would ensure higher living standards for the people of India.

The problem of balancing future economic evolution therefore resolves itself into three component parts: (a) the problem of maintaining the



data of agricultural and industrial progress properly adjusted to the normal processes of population-growth and the changing contours of markets for industrial and agricultural goods; (b) the problem of maintaining the development of the economic system of the country adequately adjusted to the processes of world progress in industrial and agricultural technology and (c) the problem of maintaining 'balance' between economic evolution and the social and cultural institutions necessary to ensure proper living standards for the population of the country both within the country and abroad. We shall take up these problems seriatim.

### Price-Controls

Implementing rising living standards for the entire population of our country would, imply in the ultimate analysis, complete regulation of the national market for industrial as well as agricultural goods and involves stabilisation of agricultural as well as industrial prices. Price stabilisation in a country where agriculture and industry have to be reconstructed to maintain occupational balance would be different from price stabilisation programmes in countries where the goal of industrial and agricultural production is a competitive market and stabilisation of prices is one of the main routes for stabilisation of production. In heavy population zones of the world like India price stabilisation has to be attempted not for balancing production in a competitive

market for industrial and agricultural goods but *for balancing the market for industrial and agricultural goods to adjust production schedules to keep up employment rates and volumes between agriculture and industry* as one of the avenues to reach higher living standards for the population of the country. In such a context the final objective of all price stabilisation schemes would be that of reaching and maintaining higher living standards rather than mere stabilisation of industry or agriculture which is suffering from temporary crisis of malaadjustment between the rate of production and the intensity of effective demand in competitive markets.

Against such a background, price stabilisation schemes would be the most effective means of adjusting production—both agricultural as well as industrial—as well as consumption—of both agricultural as well as industrial goods—to maintain better patterns of living for the population of the country. In this sense price stabilisation is only a synonym, for progressive adjustment of the mechanism of valuation to suit the imperious needs of a progressive general living standards for the population and would be difficult to be adequately implemented. Mere price control measures will not raise living standards unless they are accompanied by proper adjustment of the productive system of the country to make price control “effective” in the national market for industrial as well as agricultural products. Thus by merely raising the price for sugar, we cannot pretend to increase the volume of sugar production, nor will lowering of prices for sugar lead to a fall in the

volume of sugar production by any logical process of adjustment, since production of sugar in the country is adjusted to the entire economic evolution in the reign concerned and the price of sugar happens to be an integral part of the general price system and the price of any article is itself the result of a complicated system of valuation where economic as well as non-economic considerations act and interact on each other in order to make the price of any article "effective" in the market at any specific point of time. Necessarily mere raising of prices of any article will not reduce the intensity of demand or increase the rate of production nor will a reduction of price result in increasing the tempo of demand or reducing the rate of production of the article. The truth of these observations has been brought home to us during war time control of prices which has only resulted in creating a growing penumbra of "black marketing" even where prices were stabilised at adequate levels to allow for the changed conditions of agricultural as well as industrial production costs.

In view of the unpredictable nature of the automatic adjustment between prices and production, we cannot always anticipate that higher prices will *always* bring increased rate of production and lower prices will *always* bring decreased rate of production. If the connection between prices and production is itself not *always* capable of being *anticipated*, the task of reaching and maintaining higher living standards for the population through price control measures would assume insurmountable

table proportions, unless it is supplemented with programmes for the adjustment of agricultural as well as industrial production to make a set pattern of prices "effective." Nor can a pattern of prices be made "effective" in a market by mere adjustment of production to a predetermined design of prices alone, if the authorities who control prices and production are unable to reduce the uncertainties of consumption by regulating it to maintain an even flow of industrial and agricultural goods out of the market as soon as they are produced. Stabilisation of prices, therefore, cannot be effectively implemented without stabilisation of production on the one hand and stabilisation of consumption on the other. Each attempt at control of one aspect of economic evolution would undoubtedly carry us further and further away from the accepted pattern of a free economic civilisation and land us imperceptably but inexorably into a web of severe economic planning where prices are regulated, production is managed, consumption is rationed, employment rates and volumes are adjusted and the pattern of agricultural as well as industrial investment is governed and the entire economic civilisation balanced with the dynamics of rising living standards.

If raising the level of living standards for the population of the country is to be the goal of economic evolution, it is necessary to realise that all lines of economic evolution will have to be adjusted to implement rising living standards with ample provision for periodical readjustments to keep standards of living balanced with rising

volumes of population as well as with the normal changes in the composition of the standards of life in the country. This would mean that prices and production in each region will have to be kept necessarily adjusted to keep up employment rates and volumes and the levels of agricultural and industrial incomes and wages that would be necessary to maintain progressive living standards of the regional populations. The entire pattern of economic evolution in any given region would thus be rendered 'fluid' and capable of adjusting itself to the changing designs of regional standards of life. This close relationship between the patterns of regional economic evolution and designs of regional standards of living would render the problem of economic administration highly complicated and delicate as we shall see further down this chapter.

### Wage-Controls

Rising living standards for the regional populations can only be achieved (a) either by raising money wage and income levels (b) or by progressive lowering of the costs of living through cheaper articles necessary for comfortable living through a greater degree of technical progress or, in other words, by raising real wage and income levels. Both or either of these measures would undoubtedly have adverse effect on the capacity of the regional structure of production to maintain employment rates and volumes and cannot be achieved without 'waste' of a growing volume of

regional manpower as well as material resources. Rising money wages and incomes would inflate agricultural as well as industrial costs of production and will have to be balanced with a rising spiral of agricultural and industrial prices which would undoubtedly exhaust the very sources of economic progress, besides creating economic conditions which would carry the country away from the accepted patterns of economic progress. Rising real wages and incomes by progressive lowering of prices for agricultural and industrial goods cannot be achieved without greater technical progress in the processes of production both in agriculture as well as in industry which would undoubtedly mean displacement of labour in industry by "machines," creating unemployment which would have to be alleviated by schemes of unemployment insurance or by finding new channels of employment for the sections of population which are released by technical reconstruction of agriculture and industry. Nor can we hope that the rising rates of employment in the auxiliary occupations for servicing of economic evolution like trade, commerce, financing services, salesmanship and transport would absorb the displaced population from industry and agriculture in view of the fact that we are thinking of economic reconstruction of a country which has stayed long in the backwaters of industrial and agricultural stagnation and naturally cannot venture on a gigantic conquest of international markets for industrial and agricultural goods which alone can absorb an appreciable portion of the "employable" population in auxiliary services. Nor can planning

of economic evolution to sustain a balanced structure of occupations leave much room for expansion of auxiliary services beyond the scope that is allowed for the growth of these services in the process of adjustment of regional economic evolution to maintain regional populations at reasonable levels of living standards.

If we are to steer our economic system clear of these Scylla and Charybdis of economic reconstruction of backward tracts of the world with high population pressures on agricultural occupations, we shall have to strike a balance between these two processes of adjustment, between reconstruction of money wages and of real wage formations. This balance cannot be attained without judicious management of price changes to keep up the rate of agricultural and industrial progress properly adjusted to the new patterns of living which are to be the targets of all schemes of economic advance. In such a task, the importance of adjusting prices to production, of production to employment rates in industry and agriculture, of employment rates and volumes to income formations in agriculture as well as industry and of income formations to consumption rates in agricultural and industrial markets, to keep up the regional structure of production as well as to maintain the rate of savings necessary to finance productions schemes cannot be sufficiently over emphasised.

It is needless to reemphasise that a programme of integral readjustment of all economic evolution

to sustain regional standards of living would undoubtedly affect the technical efficiency of the regional structure of production both agricultural as well as industrial. This is inevitable since economic reconstruction in our country will have to be planned, not with a view to reach the accepted patterns of productive efficiency in the units of production, but in order to maintain adequate employment rates which are necessary to ensure progressive living standards for the regional populations.

### Planning of Agriculture

In such a context, considerations which are 'external' to mere considerations of technical efficiency would have to determine the size of the agricultural as well as industrial units of production and the same considerations would also determine the flow of investment into different channels of production. Thus the size of the average farm would have to be determined not by mere considerations of efficiency of agricultural production, but by considerations of efficiency of providing employment to a determined number of farmers per farming unit in addition to considerations of (a) farming incomes and wages (b) the volume of production necessary to make up the aggregate volume of agricultural produce to sustain regional populations (c) the flow of industrial raw materials to feed the regional industrial units and (d) the rate of production of farm bye-products together with the development of dairying and cattle farming to meet the needs of regional populations.



Similarly the size of the industrial units, the magnitude of the industrial system and the diversification of industries would have to be determined by what are known as "exogenous factors" apart from the mere technical efficiency and productivity considerations which normally determine industrial evolution under 'planning' of production for a free market: like (a) the rate and volume of employment necessary to balance population pressures on agricultural resources; (b) the rate of absorption of raw materials from agriculture to preserve the economic integrity of the regional farming units; (c) the level of wages and incomes necessary to keep up the rate of employment and (d) the flow of industrial goods into the regional markets to maintain the aggregate volume of industrial goods necessary to effectively implement progressive regional living standards. The auxiliary services like power supply, servicing of industrial plant, agricultural engineering services, financing of industrial and agricultural development, marketing services, municipal services, educational services both general and technical, public health services, news and communication services, social security services, to mention a few of the major auxiliary services will have to be kept adjusted to the needs of the agricultural and industrial schemes of reconstruction outlined above.

### **Regional Plans**

When we accept that schemes of industrial and agricultural reconstruction of the country are

to be adjusted to balance pressures of population and not to conform to any pattern of technical efficiency alone, it will not be possible to plan out a continental plan of economic reconstruction without emphasis on balancing regional plans of economic advance. It is only when we attempt to maintain balance in regional economic evolution that we can hope to reach balance in the economic system of our subcontinent. Naturally, the country will have to be split up into several economic zones for purposes of effectively implementing schemes of regional economic balance and these regions must be conceived as being, as far as possible, economically self sufficient, though each region may have a group of industrial units and farming, units which may be allocated for the production of special industrial as well as agricultural goods.

### Economic Zones

In order to implement such a programme of regional economic reconstruction, we shall have to think of zones of administration as having population units which can be easily managed and whose occupational structure can be sustained by a coordinated development of regional resources. Our country's sociological and economic problems are so complicated that we can only conceive of economic zones which have at least a million population per zonal unit (or ten lakhs) which would give us population units which are less than the population of our metropolitan areas like Bombay and Calcutta, the two big cities today

having a population of 1·4 million and 2·4 million respectively (1941).

If we accept the population of 1941 as the basis of calculation, we shall be having for the entire country about 326 such economic zones distributed as under:

Madras	49 zones.	Assam	10 zones.
Bombay	20	Hyderabad	16
W. Bengal	30	Mysore	7
U. P.	55	Rajputana	13
E. Bengal	14	Bihar	36
C. P.	16	Rest	60

These economic zones will have to be carefully demarcated with a view of zonal economic self-sufficiency and obviously the magnitude and variety of regional resources for mineral, agricultural and industrial development would form the main consideration governing the area of each of these zones. It must also be borne in mind that these zones are not solidified economic units, but flexible structures whose contours must be kept adjusted to changes in the volume of population, the techniques of regional production both agricultural as well as industrial and to the changing context of regional standards of living

The aggregate number of economic zones as well as the area of each zone would depend upon the magnitude of zonal resources together with the occupational structure that can be attained and the dynamics of regional populations; and as

the volume of population increases, the number of economic zones also will have to be increased.

### Rural and Urban "Units"

Each economic zone will have to be further split up into rural and urban units consistent with the nature of the occupational structure that will have to be set up in each zone. An average economic zone consisting of 1,000,000 population may be said to have its population distributed as under :

	<i>No. of units</i>	<i>Population.</i>	<i>Total.</i>
Rural units :	100	2,000	200,000
Urban units :	50	10,000	500,000
Small Medium :	15	20,000	300,000

Such a distribution of population in each economic zone would be essential in the heavy population pressure areas of the country like Bengal, Bihar, the United Provinces and Madras.

The present distribution of population in some of these heavy pressure areas becomes clear from the accompanying data according to the census returns for 1941.

	<i>Total population</i>	<i>Urban</i>	<i>Rural.</i>
Madras :	49,341,810	7,864,883	41,476,927
Bengal :	60,306,525	5,938,776	54,367,749
U. P. :	55,020,617	6,855,268	48,165,349
Bihar :	36,340,151	1,956,219	34,383,932

The existing urban and rural areas in these provinces are as under :

<i>Province</i>	<i>Rural</i>	<i>Urban Upto 10000 population</i>	<i>No. of units 20000 and under.</i>
Madras :	29,896	5,729	128
U. P. :	100,352	2,338	78
Bengal :	79,095	5,095	107
W. Bengal :	39,500	2,550	60
Bihar :	66,586	2,203	43

Under zonal reorganisation of the pattern of population distribution, the accompanying number of urban and rural units would emerge in the provinces noted above :

<i>Province</i>	<i>Rural units of 2000 and less.</i>	<i>Urban Units Less than 10,000</i>	<i>Between 10 to 20 thousand</i>
Madras :	4,900	2,450	735
U. P. :	5,500	2,750	825
W. Bengal :	3,000	1,500	450
Bihar :	3,600	1,800	540

The vast disparity in the group of rural units can be accounted for by the fact that according to the data furnished by the Census Report of 1941, the percentage of rural units having population of 1000 and under was 72·3 for Madras, 79·7 for Bengal, 91 for the United Provinces and 89·3 for Bihar, thus demonstrating that these heavy populations pressure areas of the country had distributed their populations widely over rural units having less than one thousand people per unit.

Such a distribution of population will necessarily mean not only waste of land resources devoted to the built-in areas of these redundant rural units but also lack of balance in the occupational structure due to the absence of auxiliary social and sanitary services, which has a devastating effect on the health and efficiency of the vast sections of population scattered in rural communities with a population of less than a thousand per rural unit. Naturally, the existing rural unit has been the weakest link in the continental economic structure of today. It is needless to emphasise that the smaller the rural unit the heavier would be the pressure of population on the land resources as the size of the rural unit is incapable of sustaining a diversified occupational structure or of balancing its economic evolution with a rising spiral of auxiliary services. In such a context, the rural unit, unable to maintain its economic balance with the evolution processes of the outside world, is forced into the impregnable framework of subsistence economy with grave sociological and psychological consequences to the rural populations encased within its rigid framework. Nor can it avoid the phenomenal waste of land resources which scattered rural communities imply in the shape of the land that is swallowed up by the built-in area of the village, the pastures that are to be allowed for the village cattle, and the absence of upto-date implements for agriculture which the incapacity of the village to maintain effective transport and communication systems with the rest of the country inevitably imposes on the rural areas, which are far removed from the reach of the

continental network of transport and communication. In fact, as the Royal Commission on Agriculture has so often pointed out, the main characteristics of village life cannot but be centuries anterior to British Rule.

The only way in which the grand inertia of centuries can be broken is by dissolving the small rural unit and resurrecting it as an area with a larger volume of population. Unless we reduce the number of rural units in the heavy population pressure areas, we cannot effectively implement any scheme of economic advance in rural areas. It is only in areas of larger population that a balanced occupational structure, which is so essential to sustain higher patterns of living, can emerge and schemes of social and cultural reform financially balanced with the resources available in the area.

Larger rural units will necessarily mean greater diversification of occupations. Houses will have to be built, schools will have to be set up, urban services will have to be maintained and public health schemes planned and implemented. In this process of clubbing smaller rural units into larger rural units, there will not only result great economy of space but it will also be possible to maintain a variety of auxiliary services like teaching, nursing, transport and communication, public health, policing, provision for public amenities like lighting, water supply and sanitation which cannot be maintained in the small and scattered rural units existing in the greater part of our country today. And it is needless to emphasise

that without the emergence of a well-balanced occupational system no higher living standards can be reached, much less, maintained.

It is necessary to urge here that the capacity of the agricultural and industrial units to absorb employable population at any time is severely limited. Even in very highly industrialised countries of the world like U. S. A., Great Britain and Germany, the percentage of population actually absorbed in the "productive" system of the country is much less than in the so called "tertiary occupations" like the liberal arts, urban servicing, transport and communication, public health and sanitation, in view of the *tempo* of technical advance in agricultural and industrial methods of production which progressively reduces the labour absorption capacity of the units of production. This explains the paradox of economic progress, that the higher we reach in the scale of economic civilisation, the greater the percentage of population employed in auxiliary services than in the actual production of agricultural and industrial goods.

In such a context, even with heavy regulation of technical progress that we might plan in order to keep up the employment capacity of our agriculture and industry, we cannot hope to provide for more than seventy per cent of the employable population in our agricultural and industrial systems of production. And as we progress with schemes of economic reconstruction the loss in the capacity of the national productive system to absorb labour must be made good by expansion of the auxiliary sections of the occupational system.



The difficulty of balancing the occupational system of our country with adequate development of auxiliary sections will become prominent when we note that in our country we cannot pretend to have some of the auxiliary services which have developed enormously in the more advanced countries of the world like the U. S. A. and Great Britain, like, for instance, advertising and salesmanship, transport and communication, and even urban servicing occupations in view of the fact that planning for regional sufficiency would eliminate all auxiliary services which normally cluster round an ever-expanding market for agricultural and industrial goods.

In this regard, neither transport, nor banking and financial services, nor newspaper and communication services, nor advertising and publicity services, nor even metropolitan services like the constructional and suburban development services, can reach the stature in our country, which they have reached among the Great Powers of the world which have built up their production and trading systems for an ever widening international market, with all the complications in intermediate finance and investment which it implies.

Necessarily, over the wider part of our country, our economic evolution must be tuned up to sustain an equibalanced structure of occupations. There can be no doubt that dissolution of the smaller rural units and emergence of vast new medium sized urban units will establish new occupations which have not yet been instituted in

our country, particularly in the rural areas. The targets we have provisionally projected will mean three important processes of economic evolution calculated to set up a variegated system of occupations: (a) heavy reduction of rural units in heavy population pressure areas (b) reduction in the smaller urban units with populations of less than 10,000 per urban unit and (c) heavy increase in the number of medium sized urban units with populations ranging from 10,000 to 20,000 in each economic zone.

The enormous area that can be reclaimed from the planless ruralisation of subsistence type of economic evolution becomes at once patent from a cursory glance at the old and the new rural areas proposed. In Madras, the new targets would reduce rural areas from 29·8 thousand to 4·9 thousand; in the United Provinces from 100·3 thousand to 55 thousand units; in W. Bengal from 39·5 thousand to 3·0 thousand units and in Bihar from 66·5 thousand to 3·6 thousand units. This enormous merging of rural units will be amply balanced by the birth of new towns which would be scattered in each economic zone so as to prevent long distance transplantation or movement of rural populations. The number of medium size towns would be increased in Madras Province, for instance, from 128 to 735, in the U. P. from 78 to 825, in W. Bengal from 60 to 450; and in Bihar from 43 to 540.

These targets in urban development are set up with a view to balance the occupational structure

of each economic zone, leaving ample room for the development of auxiliary sectors of employment. In matters of housing alone, the position in 1941 was such that in Bengal for every 4 acres we had a house, in Madras for every 8 acres, there was a house and in U. P. and Bihar every 6 acres had a house, and each house had a population of 5.4 in Bengal, 5 in U.P., 5.1 in Madras and 5.2 in Bihar with greater spreading out of population per house, each village with a population of 2000 can be said to be capable of having 700 houses, which would be an ideal size for a model rural unit, where municipal and sanitation services can be adequately developed, and better houses would mean greater development of constructional industries like carpentry, iron-wares manufacture, stones and stoneware industries, bricks and tiles, cement industries, glass industries, paints and varnishing industries, to give some of the industries which would provide employment to the regional populations.

### The Area of the "Zone"

The dissolution of the small rural unit would also provide greater scope for the development of transport industries. The area of each economic zone would be as noted under for the respective provinces.

Madras	2500 sq. miles	U. P.	1800 sq. miles.
W. Bengal	1300 sq. miles	Bihar	1700 sq. miles.
Bombay	3800 sq. miles	Central	
Punjab	3500 sq. miles.	Provinces	6100 sq. miles.

Even in high pressure provinces, the smallest economic zone with an area having 40 miles by 30 miles would provide ample scope for the development of zonal transport. If the existing urban and rural development is allowed to remain, the picture that we get is of very heavy congestion and consequent misery and squalor. Thus in Madras, we get one village for every four square miles, in Bengal one village for less than every square mile i.e. for three fourths of a square mile, in U.P. one village for every square mile, in Bihar also we get one village for a little more than a square mile. This shows that except in Madras, Bombay, Central Provinces, Punjab, Assam and the States and Agencies, we are today having in the rest of the country one village for every 640 acres of land area and when we take into consideration the built-in areas of the urban centres of each province this area is further circumscribed.

These data taken with the average density of population per square mile would give us an astounding picture of poverty and congestion. In 1941, Madras had 391 persons per square mile and naturally with an average of 5.1 persons per house and a village for every four square miles, each village may be said to have a population of about 1000 and about 200 houses per village. Bengal with an average density of 779 per square mile and a village for less than each square mile may be said to have about 125 houses per village. The villages in U. P. may be said to be slightly better than those in Bengal in the sense of greater space being available for the rural population.

It is needless to emphasise the vast and complicated problems of social and economic relations that would emerge when, in the high population pressure areas of the country, each square mile, an economic unit of 640 acres, has to support a village whose population is rarely less than five hundred per village. The economic zones that are projected would undoubtedly give greater living room and vaster spaces for the spreading out of the population in the densely occupied regions of the country.

The redistributed average density of population per square mile according to the size of the regional economic zones can be supported by the greater development of urban areas, particularly in view of the scope for the spreading out of the occupational system as is clearly evidenced by the targets for urban development that we have set out in the earlier portions of the present chapter. This is supported by the fundamental axiom of economic reconstruction for high pressure zones that the only way of building up the economic strength of each region to sustain population pressures is by greater urbanisation and the diversification of the occupational system which urbanisation necessarily implies.

Nor can we pretend to plan out a drastic transformation of the economic landscape without driving the country into the vortex of a gigantic economic and social crisis. The plan for zonal economic development given above clearly demonstrates the gradualness of zonal evolution.

## Rural Planning and Urban Development

Thus in the zonal plan, Madras will have one village for every 25 square miles, W. Bengal for every 13 square miles, Bombay for every 38 square miles, East Punjab for every 35 square miles, U. P. for every 18 square miles and Bihar for every 17 square miles and the Central Province will have one village for every 61 square miles. Every group of two villages will have a small urban unit of 10,000 population, thus each urban unit will cover an area of 50 square miles in Madras, 26 square miles in W. Bengal, 76 square miles in Bombay, 70 square miles in the E. Punjab, 40 square miles in U.P., 34 square miles in Bihar and 122 square miles in the Central Provinces. East group of three urban units will have a larger urban unit of 20,000 population, thus giving an area of economic influence for the larger urban unit covering 160 square miles in Madras, 87 square miles in W. Bengal, 253 square miles in Bombay, 233 square miles in E. Punjab, 133 square miles in the U. P., 113 square miles in Bihar, 406 square miles in the Central Provinces.

In each economic zone, we shall be having 100 rural units and 65 urban centres; and in point of view of the volume of population, the rural units would be having twenty per cent of the zonal population, while the urban units would be having eighty per cent of the zonal population, the smaller urban units having 50 per cent of the population and the larger units having 30 per cent of the inhabitants of the zone

concerned. This kind of zonal development would not only check heavy congestion of population in rural regions, but also preserve the essential social and psychological springs of the population undamaged and prevent abnormal movements of the population over wide areas. In the zonal plan adumbrated, the rural units together with the smaller urban units absorb a total of 70 per cent of the zonal population and as there will be one small urban unit for every group of two rural units, the problem of population movements is adequately stabilised.

This heavy dispersal of small urban units is planned to implement two fundamental objectives of zonal economic evolution: (a) to set up a diversified occupational structure (b) to prevent abnormal movements of population over wide areas. The clubbing together of small rural units will not only make available for cultivation more land resources, but the building up of new urban areas will relieve pressure of population on the land resources of the country. This observation becomes clear from the following table.

Province.	Rural Units.				
	<i>Approximate area of farm per cultivator.</i>	<i>Square miles per village.</i>	<i>Acres.</i>	<i>Population.</i>	<i>Area per capita.</i>
Madras	21 Acres	25	14,200	2000	7 Acres
W. Bengal	12	13	8,320	2000	4 „
Bombay	36 „	38	24,320	2000	12 „
E. Punjab	33 „	35	22,400	2000	11 „
U. P.	17 „	18	11,520	2000	5½ „
Bihar	15 „	17	10,880	2000	5 „
C. P.	57 „	61	39,040	2000	19 „

This table clearly shows that in the more fertile regions of the heavily populated zones of the country like Bengal, U. P. and Bihar, the number of acres that would be available per farmer is undoubtedly smaller than in the less fertile zones of the country like Central Provinces and Bombay. When we remember that Central Provinces and Bombay have very little facilities for irrigation, and that the soils occurring in these provinces are less fertile than in the alluvial zones of the country, it would be redundant to assert afresh that a larger farming unit per cultivator is essential in the two provinces of the country.

The advantages of larger farming units per cultivator for a country where subdivision and fragmentation of holdings have held rural living standards in their grip for over hundred and fifty years need not detain us. Rural living standards, it has been acknowledged by all who have bestowed their thoughts on the subject in our country, cannot be raised without increasing the size of the existing farming unit; some have gone to the extent of declaiming that social and cultural institutions have long prevented the rise of the "economic farm" in India, and even the Royal Commission on Labour has pleaded for the maintenance of the link between the urban labour market and rural zones in view of the difficulty of managing urban living standards to attract and keep any appreciable section of the country's population in order to relieve heavy pressure of population on our land resources. In fact our population pressures have been



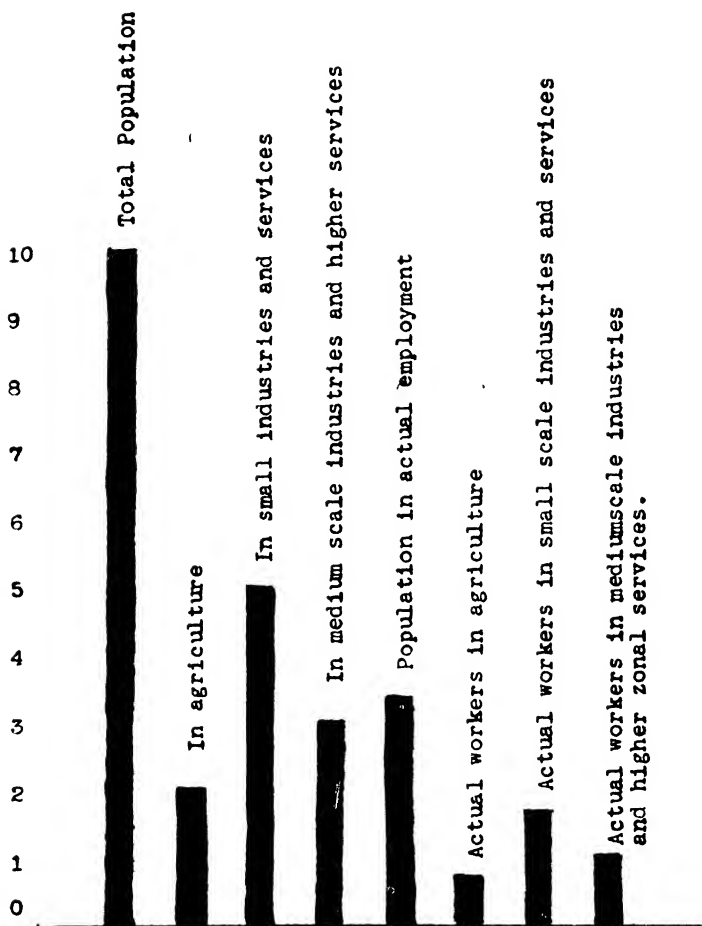
generated by the inscrutable vicious circles that pervade our economic evolution since the later half of the nineteenth century, which have defied all attempts for the past half a century either for competitive reconstruction of our agriculture or for cooperative uplift of rural living standards.

The plan of zonal economic conservation that has now been put forth attempts to remedy the fundamental problem of the farming unit in our country through the line of least social and cultural resistance. The existence of an urban centre for every two rural units will not only prevent heavy migrations of population over wide areas, but also preserves the rural populations from any drastic social, cultural and psychological change which has kept the urban labour markets of today in a dangerously fluid state and which urged the Royal Commission on Labour to plead for the propagation of the link between the village and the town to replenish the physical quality of labour in the urban labour markets of the country, while it will also ensure for each cultivator in the new rural areas a farming unit which will ensure for him an adequate standard of living.

### **Agricultural "Markets"**

The most urgent problem that should be considered in reaching and maintaining higher standards of living in the rural areas of the country is that of balancing our agricultural production with the consumption capacity of industrial regions and that of balancing our industrial production with the consumption capacity of rural regions.





EMPLOYMENT STRUCTURE  
IN  
EACH ECONOMIC ZONE.  
(in millions)

Naturally side by side with the planning out of rural life to reduce population pressures, we must also plan the coordinated development of urban markets for agricultural products and of rural markets for industrial goods, together with a conscious expansion of auxiliary services to maintain those sections of population which cannot be absorbed either by the agrarian structure of production or by the industrial units which are developed in the new urban centres.

In the zonal plan that is contemplated, about 20 per cent of the zonal population is left on the land resources of the country, 50 per cent in smaller urban areas scattered all over the zone and 30 per cent in the larger urban centres giving one small town for every two villages and one large town for about every group of six villages. Out of a total zonal population of 10 lakhs or one million, we can expect an average of 4 lakhs to be in the employable age groups and the employment structure that we get will be somewhat on the following lines :

	<i>Zonal Employment Structure (Target).</i>		
	<i>Total</i>	<i>Employable</i>	<i>Actual</i>
	<i>population.</i>	<i>Age groups</i> <i>(Estimate)</i>	
Agriculture	2,00,000	80,000	70,000
Small industries and Auxiliary services	5,00,000	2,00,000	1,65,000
Medium scale industries and higher zonal Auxiliary services	3,00,000	1,20,000	1,00,000
	10,00,000	4,00,000	3,35,000

This target put into percentage relationship between various employment groups would settle itself as under :

	<i>Total employed</i>	<i>Percentage to actual workers.</i>
Agriculture	70,000	20·9
Small industries and Auxiliary services	1,65,000	49·2
Medium scale industries and higher zonal Auxiliary services.	1,00,000	29·9
	3,35,000	100·0

### Land Reclamation

This occupational structure would mean that every cultivator would be required to produce food and raw materials for five persons in each economic zone. Such balancing will not be possible without integral land reclamation schemes, together with forest conservation projects as the table prepared for the three provinces reveals as under :

<i>Province</i>	<i>Area for imple- menting zonal Plans</i>	<i>Present in thousands of acres</i>				
		<i>Area According to survey</i>	<i>Net Area sown</i>	<i>Current allowals</i>	<i>Unculti- vated land</i>	<i>Forests</i>
Madras	69,580	79,760	31,379	9,860	10,862	13,191
Bihar	38,968	44,325	17,978	6,791	6,800	6,606
U. P.	63,360	67,848	36,081	2,795	9,964	9,276

The extent of the area that is to be reclaimed for purposes of cultivation would depend upon the pace of regional progress in the technique of agriculture, the fertility of regional soils and the crop schedules that are to be built up to reach regional living standards and cannot be statistically predetermined. Certain general observations can be built up by a study of the simple table that has been constructed above: (a) targets in zonal production to maintain higher living standards cannot be sustained without integral conservation of the forest wealth of each region (b) that every acre of land available for cultivation will have to set for itself a production target commensurate with regional agricultural needs and condition of cropping (c) that the built-in area in each zone will have to be reduced to the utmost minimum necessitating nuclear construction of rural and urban areas to reduce the extent of the area of land surface today rendered 'uncultivated' owing to the spread of living areas; (d) the land surface that would be swallowed up in giant irrigational and multipurpose river development projects will have to be reclaimed from other regions in each zone, if every zone will have to maintain that degree of economic self-sufficiency which is essential to keep up the living standards of its population; (e) adequate provision will have to be made for deficiency zones in each province, as integral development of the province will create deficiency zones particularly in the areas of power generation, multi-purpose river development projects and the areas of high grade industrialisation as in the case of new metropolitan regions that

would develop in each province to provide the rural and urban units with all their mechanical needs and equipment.

### Distribution of land

It should not be deduced, from the representative tables of land-allocation and of farming units that have been constructed above, that all the land that is reclaimed is for purposes of actual farming. Land reserves have to be provided for: pasture for the cattle have to be found from the lands that are reclaimed; forest industries have to be accounted for in the forest zones of the country, particularly in the extreme north, in the central and western zones of the country; and efficient farming would mean not only rotation of crops to preserve the essential soil properties through relaying of crops but also the efficient administration of fallow land essential to combat soil exhaustion, which is the most preponderating menace in continuous intensive farming with chemical manures.

Necessarily farming practices and the size of farming units would have to depend on all these various factors which go to determine the fundamental details of agricultural production in each region and each economic zone. Normally the primary objective of agricultural production in each zone must be the highest degree of zonal economic self-sufficiency in matters of food requirements of the people and the needs of industrial

reconstruction in matters of fundamental raw materials. This economic self-sufficiency is imperative in view of the fact that no economic zone in the country can keep its agricultural and industrial production schedules open to the 'exogenous' uncertainties of a shifting 'market,' over which the zonal authorities have no control.

Incessant adjustment of zonal production schedules to the dynamics of extra-zonal market would stabilise neither agricultural nor industrial production, nor ensure higher zonal standards of living by stabilising zonal employment ratios and volumes. Any disturbance, from whatever quarter that disturbance may arise, to the structure of zonal employment rates and volumes would undoubtedly impose a strain on zonal structures of production which may not be able to with stand it.

As long as zonal economic administration has to maintain a fine balance in economic relationship between zonal production schedules and employment rates for the employable bloc of zonal population the thesis is unchallengeable that all uncertainties arising from the side of industrial and agricultural markets should be eliminated. The full import of this thesis becomes apparent when we understand the magnitude of the problem of economic balance in a country where living standards have to be raised for a volume of population which is showing no signs of slowing down its pace of growth, with an economic landscape where the opportunities for the expansion of population are severely ermined



with disastrous consequences on the formation of regional living standards.

### Men and Materials

In a country like India, planning for higher living standards must be effectively implemented by a close coordination between the processes of fuller utilisation of manpower with the processes of fuller utilisation of material resources necessary to provide the population with the basic contents of rising standards of living. This necessarily puts definite limits on the degree of mechanisation of agricultural and industrial production, even as it imposes severe limitations on "productivity" in order to keep up the rate of labour absorption in the industrial units. This aspect of economic reconstruction is very pressing in its importance, as any kind of agricultural reconstruction would undoubtedly mean release of vast blocs of farming population on non-agricultural sectors of the zonal occupational structure whose "re-employment" is inescapable, if higher living standards are to be attained and maintained for any span of time at all.

It is an old axiom that the prosperity of industry depends upon the prosperity of agriculture and the importance of this has been driven home to us during periods of trade cycles in the competitive economic civilisation that has been today built around the 'market', though it is but very recently that we have realised the full import of

this close connection between farming and general economic prosperity. The fundamental economic problem of our country, the phenomenal poverty of the people in general, is the result of lack of balance in the economic evolution of the country in which high pressures of population on land resources have stifled agricultural living standards and have been unable to balance an industrial system which can, in any way, build up an adequate structure of occupations to implement higher living standards for the population of the country.

Judged from this angle, the economic prosperity of each zone would fundamentally depend upon the contours of the zonal occupational structure and the income formations that we can maintain in zonal agriculture and industries and these income formations would undoubtedly depend upon the capacity of each zone to balance its own structure of production both in agriculture as well as in industries. Such a balance would mean the building up of adequate "markets" for agricultural goods in urban areas, and for industrial goods in rural regions of each economic zone; and maintaining these markets properly adjusted to the dynamics of population, if higher living standards are to be ensured for the population that each zone goes on accumulating in the normal processes of population growth.

Balancing of agricultural production, in the sinister rural context of today, is not possible without an extensive de-ruralisation of population to lift the enormous pressure of population from

the land resources of the country. Naturally, to reach higher living standards we have to postulate for a smaller volume of agrarian population, which alone can raise the size of farming units, make agricultural reconstruction possible, give more grazing ground for the cattle of the country and provide ample room for the growth of dairying and horticulture without which the menacing problems of malnutrition that haunt the major sections of the population of the country can hardly be combated. That is why the target of rural population that is to be attained at least by the end of the present century is placed at twenty per cent of the entire zonal population, even though such a reconstitution of economic demography would mean serious limitation on the extent of rural markets for industrial goods, with resultant damage to the growth of the zonal industrial structure as well as its capacity to absorb labour.

### **The Smaller Urban Units**

In such an economic landscape, the small urban unit which absorbs fifty per cent of the zonal population is easily the connecting link and balancing factor between the agrarian tracts and the greater urban regions of each zone. This small urban unit will have to provide the 'entrepot' of economic relations in the zone, and be so constructed as to provide the most effective channel of adjustment between rural and urban evolution of each zone. Its function would be to absorb agricultural products which are in

surplus of the requirement of the larger zonal urban units and the industrial products which are unabsorbable in the zonal rural markets.

Such an evolution of the smaller urban units, which provide the backbone of the entire zonal economic system, would postulate for the development of the units with special emphasis on the preparation of raw materials for urban consumption in each zone and the fabrication of cheap industrial goods which would have wide markets in the rural 'markets' and 'special' regional industrial goods which cannot be 'mechanised' to the levels of "mass production."

Necessarily, the smaller urban units in the zone will have an occupational structure whose composition would weigh heavily on the side of auxiliary agrarian and industrial services, like transport service, educational and sanitary services, engineering services, health and medical services, and services relating to the cultural development of each zone. The auxiliary agrarian services will have to include canning, processing and preparing of zonal food products, organisation of marketing of zonal agricultural products, assembling and servicing of simple agricultural machinery and implements, maintenance of irrigational and power facilities in agrarian areas, while the industrial evolution of the smaller urban units will have to proceed along the lines of small scale industrialisation like rice-milling, manufacture of furniture, general engineering industries, metal work, manufacture of simple agricultural and industrial

mechanical contrivances, simple automobile servicing, soap and gur manufacture and preparation of oils, and simpler electrical engineering services.

Considering the peculiar and important economic functioning of the smaller urban units, which have to absorb the greater portion of the zonal volume of population, the units of production and servicing can only be of the smaller type, with the greatest scope for absorption of labour at income levels which would ensure for the working sections of the zonal population an adequate pattern of living standards, together with the greatest degree of mobility of servicing units to cover the economic as well as cultural needs of the rural regions that are connected with the smaller urban units in each zone.

The occupational distribution of the zonal population may be taken to be as under:

## PERCENTAGE OF TOTAL EMPLOYABLE AGE GROUPS

<i>Industries :</i>	<i>50 per cent</i>	<i>Auxiliary services</i>	<i>50 per cent.</i>
A. Textile group	20 per cent	A. Transport and Trade	20 per cent
B. Preparation and processing of raw materials including dairying and canning.	15 per cent	B. Constructional occupations including public health and sanitation.	10 per cent
C. Engineering and allied industries.	5 per cent	C. Engineering services	5 per cent
D. Zonal special industries including Arts and Crafts.	10 per cent	D. Education services	5 per cent
		E. Miscellaneous services, including Zonal Administration, Entertainment, Domestic service, Financing of industry and agriculture, etc.,	10 per cent

This occupational structure of the smaller urban units would have to be constructed on certain fundamental assumptions. The greater percentage of the volume of zonal population in industries would indicate not only decentralisation of zonal industries but also the size of the industrial units. In almost all the essential industries of the zone, the size of the unit will have to be kept adjusted to the intensity of population pressure. The heavier the pressure of population on the occupational structure, the greater will have to be the labour absorption capacity of the industrial system and the smaller will have to be the size of each industrial unit.

Such an industrial evolution would further imply that the degree of mechanisation and the rate of capitalisation of the industrial system also will have to be adjusted to population pressures. The smaller urban centres and even the larger urban centres of each zone will have to reach a very high degree of zonal financial self sufficiency, except in regard to the zonal special industries, which will have to build up interzonal and international economic relationships and consequently will have to maintain a competitive pattern of productive efficiency with standardisation of special zonal products and management of costs of production to keep up with the changes and shifts of the wider markets for industrial goods.

These observations would necessarily make it imperative that adjustment of labour absorption capacity of the industrial units and of 'capitalisation'

of the industries to zonal population pressures is possible only in the case of those industries whose markets are confined to the zone concerned. Thus essential zonal industries like the textile group of industries, preparation of agricultural goods for consumption, general engineering groups of industries, constructional industries and those arts and crafts which cannot be subjected to any high degree of mechanisation processes like ivory carving, fine metalwork, lacquer work, silver thread weaving, finer types of pottery, will have to be relied upon to balance population pressures on the occupational system of the zone; and the size of these industrial units will have to be small as in the case of cottage industries in Japan, rarely exceeding 10 to 15 labourers per industrial units to cut down overhead expenses in those areas where population pressure is very heavy as in Bengal, Bihar, the United Provinces and Madras.

### **The Larger Towns**

It is needless to urge that the larger urban units in each zone will have slightly different occupational structure with reduction in the percentage of population in the industrial group and increase in the percentage of population absorbed in the "auxiliary" groups of the occupational structure, as indicated in the table constructed below:



## PERCENTAGE OF TOTAL EMPLOYABLE AGE GROUPS

<i>A. Industries</i>	<i>35 per cent</i>	<i>Auxiliary groups</i>	<i>65 per cent.</i>
1. Textiles	15 per cent	1. Transport and Trade	30 per cent
2. Engineering and Allied industries	10 "	2. Public Administration and Finance including education services.	20 "
3. Chemical and special industries	5 "	3. Constructional services including Engineering	10 "
4. Miscellaneous industries	5 "	4. Miscellaneous	5 "

This foregoing table is built upon the universally accepted principle of all economic evolution, that the higher a country climbs in the scale of economic evolution, the greater would be the percentage of population absorbed in the auxiliary occupational groups or as Colin Clark would call them in "tertiary services". Thus in the bigger urban centres, if we desire to maintain balance in economic evolution, the industrial system should be so constructed as to absorb only 35 per cent, the rest of the working population being absorbed in the auxiliary services including trade, finance and social service groups.

Apart from the reconstitution of occupational groups, the most urgent problem in all economic evolution is that of balancing the occupational structure on the economic resources of the zone, with adequate income formations in agriculture, industry and the auxiliary groups, in order that the zonal population may be ensured proper living standards. Thus agricultural income formations will have to be sustained by markets for agricultural goods in the smaller and larger industrial units of the zone, and industrial income formations will have to be balanced by markets for industrial goods in the rural regions of the zone, while maintenance of auxiliary services will have to be adjusted to the march of economic progress in each zone and the structure of social priorities that would be built up on the fundamental data of zonal economic advance.

In the scheme of economic reconstruction adumbrated above, two main objectives are kept

in view : (a) gradual and progressive urbanisation of the vast rural population of the country and (b) reaching of higher living standards for the people. Neither of these objectives of future economic evolution can be attained without larger farming units in the rural regions and smaller industrial units in the new urban regions with an integral development of auxiliary occupations which would implement adequately the cultural development of each zone and sustain 'balance' in economic evolution.

The ultimate occupational target of zonal economic evolution would leave only 20 per cent of the zonal population in primary production, about forty per cent in secondary production and about forty per cent of the population in auxiliary occupations, yielding an occupational structure which would maintain balance in economic evolution of the zone and ensure better living standards for the zonal population, provided the framework of economic relations that we build up on the occupational structure can be kept incessantly adjusted to the rates and volumes of growth of the zonal populations.

In the task of urbanising the vast rural population of the country, it is needless to urge that breaking up of the economic and cultural isolation of the village is as much an objective as the strengthening of the cultural relationship between the town and the village which alone can ensure that solidarity in economic evolution which the world lacks today.

## The Small Industries

In such a process of economic readjustment, specially in our country, the role that small scale industries can play, need hardly be exaggerated, in the binding up of adequate standards of living for the vast population of our subcontinent. The industrial needs of the country are such that over vast regions, we shall be called upon to maintain enormous flexibility in the industrial system which alone can ensure quick and frictionless adjustment of industrial costs to the chops and changes of markets for industrial goods so as not to create 'unemployment' in industrial occupations with the consequent dislocation to the occupational system. Large and heavily mechanised industrial units do not possess this "flexibility", let alone the labour absorption capacity which would progressively deteriorate with the 'mechanisation' and "capitalisation" of the industries.

Though the undoubted advantages of heavy 'capitalisation' and 'mass production' to increase the composition of higher living standards are admitted, the peculiar conditions which preside in the economic setup of our country would lay more emphasis on occupational redistribution of population rather than on the processes of 'mechanisation' and "capitalisation" of the industrial systems to keep up an abundant flow of industrial goods into the markets of the country. Here it is necessary to emphasise that we must regulate production to the dynamics of 'markets' rather

than regulate markets to the 'capitalisation processes' of production, through the advertisement and ballyhoo methods prevalent in the industrially advanced countries of the west.

It is in this sense that we can claim that the processes of economic advance in our country cannot be judged from the accepted Western standards of economic adequacy or technical efficiency. Mechanisation in India would only be a fundamental auxiliary to human labour and never a substitute for it. We, in this country, can never pretend to reach either the speed that has kept western civilisation in a state of constant turmoil or the abundance and variety of industrial products that flow out of the giant industrial units of the west without destroying that balance in occupational structure which is essential, if we are to reach better designs of living for the vast ruralised populations of our country. Nor can we pretend to tune up our production schedules to the contours of an ever-widening markets for our agricultural and industrial goods without exposing our economic civilisation to the inherent instabilities of world economic evolution and the paralysation of the occupational system which occurs during periods of great change and adjustment that are known today as trade and financial cycles born either out of uncontrollable factors of economic advance or out of the widening discrepancy between the pace of production under high degree 'mechanisation' and 'automatisation' and the intensity of effective demand for goods in the national as well as international markets.

Necessarily, therefore, higher living standards for the population and the maintenance of occupational structure to implement them do not mean either levelling up of incomes or levelling down of existing standards of living in the upper strata of society; nor does it involve a process of standardisation of living designs all over the country. Nor do we intend to set up in this country an egalitarian paradise of cultural and economic mediocrity. Any attempt in that direction would render the ancient civilisation of the country sterile and dry up the main cultural springs of existence which preserve the individuality of a regional civilisation and the fundamental difference in the composition of personality between man and man; and the imperative spiral of occupational set up which alone can sustain and preserve the essential contour of a live economic civilisation.

### Changing Civilisation

It is in this sense that we have to recognise the existence of divergences in the occupational formations of a dynamic economic civilisation with the consequent changes and shifts in income formations in the main departments of regional economic evolution like agriculture, industry, trade and commerce and the auxiliary social and cultural services which are essential to maintain better patterns of living for the regional populations.

Against such a background, 'economic balance' is fundamentally a dynamic concept of economic

adjustment of the essential data of economic progress to the progressive patterns of better living. The target of all economic advance must be human work and welfare: and this target itself is a relative concept: relative to the inexorable data of material advance. Necessarily, the essential spiral of social priorities, in which employment, as a means to happy ordered life, should be the first priority, is the ultimate datum to which all schemes of production are to be kept adjusted. Employment here is not drudgery: but application of human energy to the fabrication of commodities and services which would make living conditions for the majority of population eminently desirable and all other data of economic progress like productivity, income formations, wage standards and price formations are only means to implement the goal of regional human welfare.

### **Long-range Stability.**

In regional economic evolution, specially in a country with high population pressure, implementation of such a scheme of economic advance would have to start with the liquidation of the scheme of competitive evolution in agriculture, industry and the "tertiary" occupations that has been the fundamental feature of all individualistic economic evolution. All the different departments of regional economic evolution would have to be knit together into an integral pattern of regional economic advance to sustain higher patterns of living in the zones concerned.

This would necessarily imply the elimination of profit and regulation of production to maintain an occupational structure which would ensure for every individual an adequate standard of life commensurate with regional conditions of living. Thus agricultural and industrial production will have to be kept adjusted to build regional patterns of living for the different strata of population; and standard of life will have to be built up on the conceptions of primary, secondary and tertiary sections of regional life with adjustment of regional production to maintain the flow of goods and services to sustain these sections.

In such a context, standardisation of regional living designs would be undesirable, even as it cannot be expected to maintain continuity or variety of regional production to maintain labour absorption capacity of the productive system. It is not mere size of population that can stabilise production, nor can the apparatus of production be said to have reached its goal by producing a set volume of goods to meet the basic needs of the regional populations. If occupational balance is to be the ultimate goal of all regional economic evolution, escape for the dynamics of regional population will have to be found, not in mere growth of the productive system, but in the diversification of the occupational structure, with greater emphasis on the service groups of the occupational set up.

Such a readjustment would preserve long range stability in the regional productive system



as otherwise the annual growth of regional populations would progressively increase employment pressures on the regional structure of production with consequential rise in the costs of production and distortion of prices which would result in reduction of real standards of life, if regional living standards have to be implemented through a regional pricing mechanism. Such an evolution would imply either incessant adjustment of prices to wipe out the widening gaps between real and nominal regional designs of living or reconstruction of the regional structure of production to manage costs of production to achieve the same ends with disastrous consequences on the regional rates of employment.

### Planning and Economic Civilisation

These observations should not be taken to imply that it is possible to *completely eliminate* all forces in regional economic evolution which would create periodic frictional and structural unemployment in a quixotic drive for stabilisation of set patterns of production. Economic life implies incessant change and incessant adjustment of economic data to that process of change and would create some degree of unemployment of factors during the process of periodic rehabilitation of production and prices to the new forces manifesting in economic evolution at different points and time.

The object of all economic administration should be, not elimination, but reduction of the

intensity of unadjusted processes in economic evolution. From this angle of approach, the plans adumbrated above should not be taken to be the final word in the adjustment of economic processes for all time ; they should only be taken as demonstrating the obvious avenue of economic reconstruction to reduce the problem of economic maladjustment which has caught our country in its malicious grip and generated the fundamental problem of poverty by destroying 'balance' in economic evolution which alone could have maintained better living designs for the population of the subcontinent.

Nor should it be argued that these plans would ensure for the population of the country very high standards of living from the point of view of twentieth century concepts of material welfare. Any attempt to reach the standard of life prevailing in the advanced countries of the world like England and America for our population is like flying to the moon on the tail of a tiny kite. Such a reconstruction would only open up menacing discrepancies in our economic life and would create problems of maladjustment of economic evolution which might seriously undermine even the existing patterns of living for the future generations in our country.

All these observations are urged to emphasise that the agricultural and industrial development of the country in the near future should be planned to sustain regional economic self-sufficiency and a pattern of occupational structure which would

lift the regional living standards far above the existing subsistence designs of living.

Judged from this angle, our agricultural evolution must be regulated so as to dissolve the major problems of "high pressure" agriculture that we find today. That can only be done by ensuring wider urbanisation in such a way as to avoid the sociological as well as financial problems of bigger types of urban development, through concentrated and dispersed development of smaller urban units which will bridge the widening chasm between the evolution processes of agriculture and industry. Such an evolution can only give us a wide area of small scale industrialisation, with about seventy per cent of the population remaining absorbed in agriculture and small scale industries, which alone can effect proper balance between population pressures on regional patterns of employment and the capacity of the regional industrial system to effectively provide facilities for wider urbanisation of the regional populations without which no economic advance is possible for the population of the country.

There can be little doubt that, in the existing stagnant economic set up in the country, there can be no escape from the grim problem of poverty for the vast population of this subcontinent, except through intensive regulation of economic evolution involving rebuilding of agriculture through reduction of population pressures on the land resources, industrial reconstruction with a view to provide the flow of goods and services to reach higher

designs of living for the population, regulation of population movements between occupations which would otherwise destabilise occupational structure and reduce standards of living, channeling out of investment to prevent misdirection of productive resources and, finally, organised movement of goods and services to prevent undue economic strain on the processes of economic evolution which are necessary to maintain the outlines of an economic evolution which is necessary to combat the grim problem of poverty and the menacing impact of population pressures on rising standards of living.













